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PRELIMINARY REPORT

ON A JOURNEY OF

ARCHÆOLOGICAL AND TOPOGRAPHICAL EXPLORATION

IN

CHINESE TURKESTAN,

BY

M. A. STEIN,

INDIAN EDUCATIONAL SERVICE.

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Introductory.

In June, 1900, I was placed by the Government of India on a year's special duty, for the purpose of archæological explorations in the southern portion of Chinese Turkestan, and particularly in the region of Khotan. The preparation of a detailed account of these explorations and of the antiquarian and epigraphical discoveries which I was fortunate enough to make, will require considerable time and labour. Uncertain as to when I may be able to secure in India the leisure needed for this task, I have deemed it best to utilise a part of the short period of deputation in England granted to me since my return from Turkestan in July last, in writing the present Preliminary Report. Brief as it must necessarily be, I hope it will suffice to show in general outlines the character and scope of my explorations as well as their historical and topographical interest. The information embodied in it may also prove useful to those fellow-scholars who are likely to co-operate in the elucidation of the antiquarian results and, in particular, of the epigraphical finds. The few illustrations which it has been found possible to add to this Preliminary Report are intended only to show specimens of the main classes of objects represented in the collection brought back by me, and to indicate the wealth of materials contained in the series of nearly a thousand

photographs I took during my journey. The publication of maps and plans requiring more time must be left for the full Report.

Formation of plan.

The idea of archæological work in the region of *Khotan* first suggested itself to me in the spring of 1897, when during a short visit to Europe I became acquainted, through personal communications from the late Professor BÜHLER, with the important finds of ancient birch-bark leaves showing Kharoshṭhi writing, which had been acquired in part by M. DUTREUIL DE RHINS in the vicinity of Khotan, and which have since become known after that distinguished but ill-fated traveller as the "Dutreuil de Rhins Manuscript." These remarkable fragments, containing a Buddhist text in early Prakrit, were on their publication at once recognised as the oldest then known Indian manuscript and would alone have sufficed to direct attention to Khotan as a field for archæological enterprise. But about the same time that they found their way to the museums of Paris and St. Petersburg, other curious epigraphical finds from the same region began to reach Calcutta in increasing numbers.

Since the discovery in 1889 of the ancient birch-bark Codex known as the "Bower Manuscript" and of other Sanskrit texts at *Kuchār*, in the northern portion of Chinese Turkestan, Dr. A. F. R. HOERNLE, C.I.E., late Principal of the Calcutta Madrasah, has devoted continuous efforts to the decipherment and elucidation of these important records of early Indian culture in Central Asia. On his recommendation the Government of India in the Foreign Department issued instructions to the Resident in Kashmir, and to their political representatives at Kashgar and Ladak, concerning the acquisition of such antiquities as might be obtainable from Chinese Turkestan. The exertions of these officers, and particularly of Mr. G. MACARTNEY, C.I.E., the diplomatic agent of the Government of India at Kashgar, were attended with success. A "British collection of Central-Asian antiquities" was gradually formed at Calcutta, under Dr. Hoernle's charge, its most notable additions during the years 1895–97 consisting of manuscripts and other remains which were said to have been obtained by native "treasure-seekers" from ancient sites near Khotan and in the neighbouring portions of the *Taklamakān* desert. A special feature of these acquisitions, and one that excited no small amount of curiosity, was that they contained, besides documents in the Indian Brāhmī and in Chinese characters, a large proportion of manuscripts and "blockprints" in a variety of entirely unknown scripts.

But while the materials thus accumulated, no reliable information was forthcoming as to the exact origin of the finds or the character of the ruined sites which were supposed to have furnished them.

No part of Chinese Turkestan had as yet been explored from an archæological point of view, and it was easy to realise how much the critical study of the Khotan antiquities would be impeded, and how much of their historical value lost, if the many antiquarian questions raised by them could not be investigated in the light of accurate researches on the spot. There was a practical consideration, too, which to me indicated the urgency of such explorations. Judging from my Indian experience it seemed certain that the operations of native "treasure-seekers" at ancient sites were necessarily accompanied with much destruction of valuable evidence. Thus the commercial value which had come to be attached to "antiques" through the purchase of European officials, was likely to threaten with additional risk those relics of a bygone culture which might still survive.

The plan of archæological explorations about Khotan which I had thus formed, was discussed by me in the summer of 1897 with Professor BÜHLER and other fellow-scholars in Europe, though the necessity of first completing the publication of my work on the Sanskrit Chronicle of Kashmir did not allow me to approach at once its practical execution. On reaching Kashmir in May, 1898, I took occasion to consult Captain S. H. GODFREY, I.S.C., Assistant Resident in Kashmir, who previously as British Joint-Commissioner in Ladak had actively assisted in the acquisition of antiquities from Khotan, on the numerous practical points, such as the choice of route, transport arrangements, expense, &c. that required consideration in connection with my project. In the following month, I wrote to Dr. HOERNLE, then engaged at Simla in reporting on the previously acquired Central-Asian antiquities, and asked his assistance towards obtaining for my project the sanction and support of the Indian Government. Dr. Hoernle readily agreed to further my proposals, and it was largely due to the generous interest shown by him, and the weight necessarily attaching to his recommendation that the formal application which I submitted in August, 1898, through the Government of Punjab, met with favourable consideration. Owing to the exigencies of the post then held by me under the Punjab University, I had to limit my original scheme to a journey of six months to be undertaken during the summer of 1899. The total expenditure involved was estimated by

me at Rs. 6,800, and this sum the Supreme Government and the Government of the Punjab agreed to provide by joint contributions of two-thirds and one-third respectively.

Official arrangements.

My appointment in the spring of 1899, to the Indian Educational Service as Principal of the Calcutta Madrasah, necessitated a postponement of the journey and a reconsideration of the official arrangements concerning it. But the Government of Bengal, under SIR JOHN WOODBURN, showed the same generous desire to facilitate my proposed explorations in the interest of Indian archæology as SIR MACKWORTH YOUNG'S Government had done in the Punjab. On the other hand, the changed conditions of my appointment permitted an expansion of the time limit and also of the scope of the journey. Under the modified scheme which received final sanction in a letter of the Government of India in the Department of Revenue and Agriculture, dated 14th July, 1899, the Government of Bengal agreed to depute me on special duty to Chinese Turkestan for a period of one year from the end of the summer vacation, 1900. To meet the estimated expenditure on the journey and explorations (Rs. 9,000), as well as the cost of officiating arrangements in my Calcutta appointment (Rs. 2,000), the Supreme Government increased their grant to Rs. 6,500, while the remaining sum, as far as it was not covered by the contribution which the Punjab Government kindly allowed to stand, was provided by a grant from the Government of Bengal.

It was solely through the consideration and material aid so liberally accorded to me by the Supreme Government and the Local Governments of the Punjab and Bengal that I was enabled to carry into execution the scientific enterprise I had planned. I accordingly feel it my duty to record here my deep sense of gratitude to the Honourable SIR CHARLES RIVAZ, K.C.S.I., who as member of His Excellency LORD CURZON'S Council sanctioned the final proposals, as well as to their Honours SIR MACKWORTH YOUNG, K.C.S.I., and SIR JOHN WOODBURN, K.C.S.I., who by their kind personal interest encouraged me in submitting them, and from provincial resources provided a great portion of the expenses. It is an equally pleasant obligation to mention my grateful acknowledgments to Mr. T. W. HOLDERNESS, C.S.I., late Secretary to the Government of India in the Revenue Department, the Honourable F. F. SLACKE, C.S., Secretary to the Government of Bengal, and my friend Mr. H. S. MAYNARD, C.S., late Junior Secretary to the Punjab

Government, who by their valuable advice and ever ready assistance materially facilitated all official arrangements.

During the cold weather of 1899-1900 much of my time and attention was occupied with practical preparations for the journey. An important preliminary step had already been taken by the Government of India in the Foreign Department, which obtained for me a Chinese passport from the Tsung-li-Yâmen authorising me to travel in Chinese Turkestan for purposes of exploration. In another direction I was offered valuable aid by the Survey of India Department.

Assistance of Survey Department.

The necessity of fixing accurately the position of ancient sites and of collecting fuller materials than hitherto available for the study of the historical topography of the region to be visited brought surveying operations into close connection with my immediate task. But I was anxious from the first to utilise whatever opportunity the journey might offer for general geographical work. Colonel ST. GEORGE GORE, R.E., Surveyor-General of India, proved most willing to further this object. He kindly agreed to depute with me one of the Sub-surveyors of his Department, and to provide the necessary equipment of surveying instruments. He also placed at my disposal a special grant intended to cover the additional expenses necessitated by the employment of the Sub-surveyor and the consequent extension of my operations. Babu Ram Singh, the Sub-surveyor selected, had accompanied Captain Deasy during the latter part of his recent explorations in Chinese Turkestan and was thus specially qualified to render useful service.

The liberal assistance accorded by the Survey of India Department made it possible to carry on a continuous and accurate survey by plane-table and theodolite through the whole of my travels in Chinese Turkestan. Its results cannot be fully illustrated until the materials brought back in the form of plane-table surveys, triangulation records, photogrammetric views and astronomical observations have been worked out for the maps now in preparation at the Trigonometrical Survey Office, Dehra Dun. But I hope the information on topographical work embodied in the present Report will suffice to show that I have spared no effort to utilise to the full the special facilities accorded to me. For these I may be allowed to express here my sincere obligations to Colonel GORE and the distinguished Department of which he is the head.

Preparations for journey.

Among the personal preparations claiming attention was the study of Eastern Turkī, the language of Chinese Turkestan. During the cold weather of 1899–1900 I acquired a fair practical knowledge of it with the help of a Kōkandī servant whom I engaged at Peshawar, and who subsequently followed me to Kashgar. By the middle of April, 1900, I was able to leave Calcutta for Kashmir, where I completed the outfit and transport arrangements needed for my camp. In regard to these practical details, which, in view of the difficult route to be traversed and the distances likely to separate us thereafter from civilised "bases of supply," needed careful attention, Mr. Macartney had favoured me with many valuable hints from Kashgar. I was also able to utilise the experience which I had myself gained during previous years on my many tours through the mountains in and about Kashmir.

The Government of India had granted me permission to use the route *viâ* Gilgit and Hunza, for the journey to Kashgar, which was to form my proximate goal. By the end of May the snow on the mountain ranges between Kashmir and Gilgit had melted sufficiently to make the passes just practicable for laden animals. By that time, too, the Sub-surveyor's little party had joined me, and all requisite stores and equipment had been duly collected and packed at Srinagar. The latter included two cameras, with over a thousand photographic glass plates; a complete outfit of instruments for theodolite and plane-table survey work; a Bridges-Lee photo-theodolite which Mr. J. Eliot, head of the Indian Meteorological Department, had kindly lent me for photogrammetric survey purposes; sets of instruments for meteorological, altitude, and anthropometrical observations; two specially constructed galvanised iron water tanks for use in the desert; and also a couple of carbines and revolvers issued by the Government of India in the Military Department, for which happily there proved to be no practical need whatsoever.

Start from Kashmir.

On the evening of the 29th May I left Srinagar in boats for Bandipur on the Volur Lake, and on the morning of the 31st my caravan, numbering 16 baggage animals, set out from this little port *en route* for Gilgit. Captain BRETHERTON, D.S.O., Assistant Commissary-General for Kashmir, had made ample arrangements for the supply of transport, &c. along the "Gilgit Transport Road." Though

the snow still lay deep and the weather was trying, the *Tragbal* and *Burzil* Passes (11,800 and 13,300 feet above the sea respectively) were crossed without mishap. Pushing on by rapid marches through the Dard valleys of Gurēz and Astōr and across the Indus at Bunji, we reached the Gilgit cantonment on the 11th June. Thanks to the kind offices of Captain J. MANNERS-SMITH, V.C., C.I.E., Political Agent, Gilgit, whom I had the good fortune to meet *en route*, and of the several military officers in charge of the Commissariat and other Departments at Gilgit, I was able during the short halt necessitated by fresh transport arrangements at this last out-post of Anglo-Indian civilisation to make good the various small defects in the equipment of my caravan which the experience of the previous marches had brought to light.

March through Gilgit and Hunza.

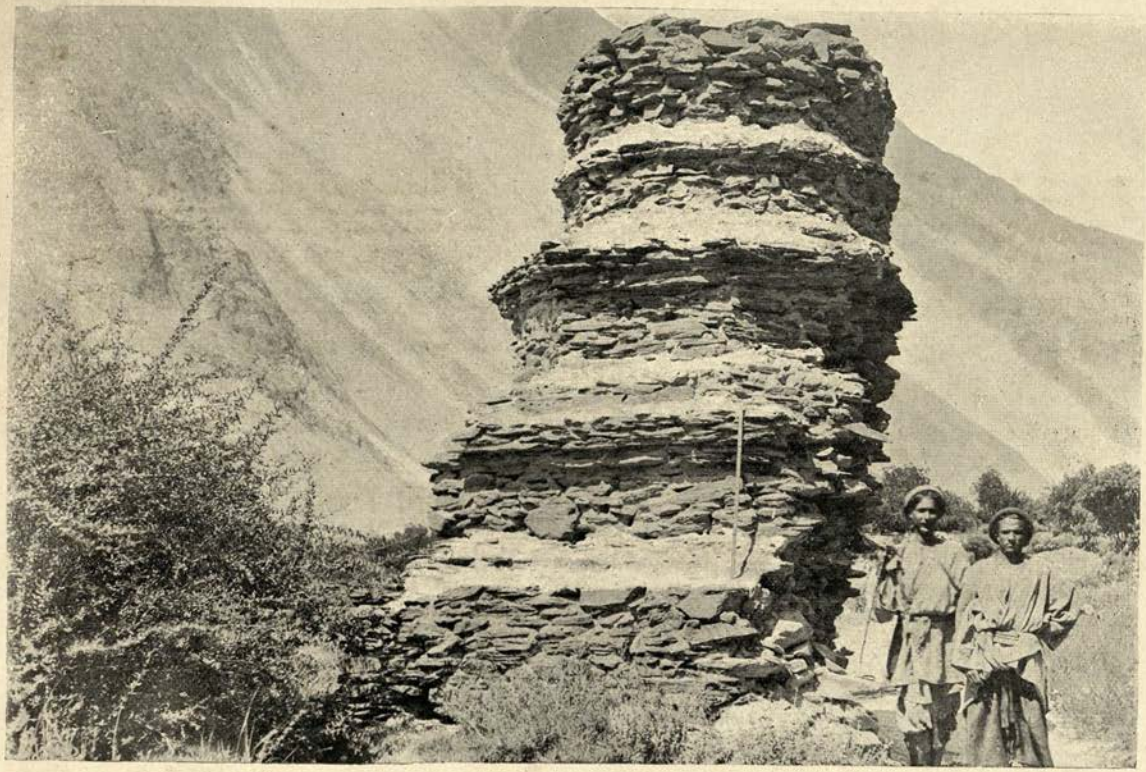
Captain J. Manners-Smith, who has availed himself of his exceptional opportunities for studying the races inhabiting the mountains between Kashmir and the Hindukush, was kind enough to communicate to me much of value concerning their customs and traditions. Guided by the information of this distinguished officer I was able to examine several sculptural remains of an earlier Indian culture surviving in the vicinity of Gilgit, such as a colossal Buddha relievo carved on a precipitous rock face, some five miles from the Gilgit Fort. Through him, too, I first learned of *Palóyo*, as the Dard designation of the people of Skardo or Baltistān, with which, I think, we may safely connect the hitherto unexplained term for that territory, *Po-liu*, as used in the Chinese Annals and in the narratives of the old Chinese pilgrims.

On the 15th June I started from Gilgit, filled with a grateful recollection of the kind help and hospitality which I had enjoyed among the last British officers I was to see for some time. By the excellent bridle path constructed by the Military Works Department since the brilliant little campaign of 1891 opened up Kanjūt or Hunza, the great natural difficulties of the route leading along the Hunza river up to the centre of the valley have been overcome. Marching round the mighty buttresses of Mount Rakipōshi and through mountain scenery as grand as any I have ever seen in the Himālaya, we passed on the third day into the territory of the chiefs of Hunza and Nagir. Close to the hill-fort of Nilth, famous from the campaign so

graphically described by Mr. Knight's pen, I visited with interest the deep-cut gorge descending from a glacier of Rakipōshi, where the daring exploit of Captain Manners-Smith and his handful of Dogrās finally broke the resistance of the Kanjūtī hillmen.

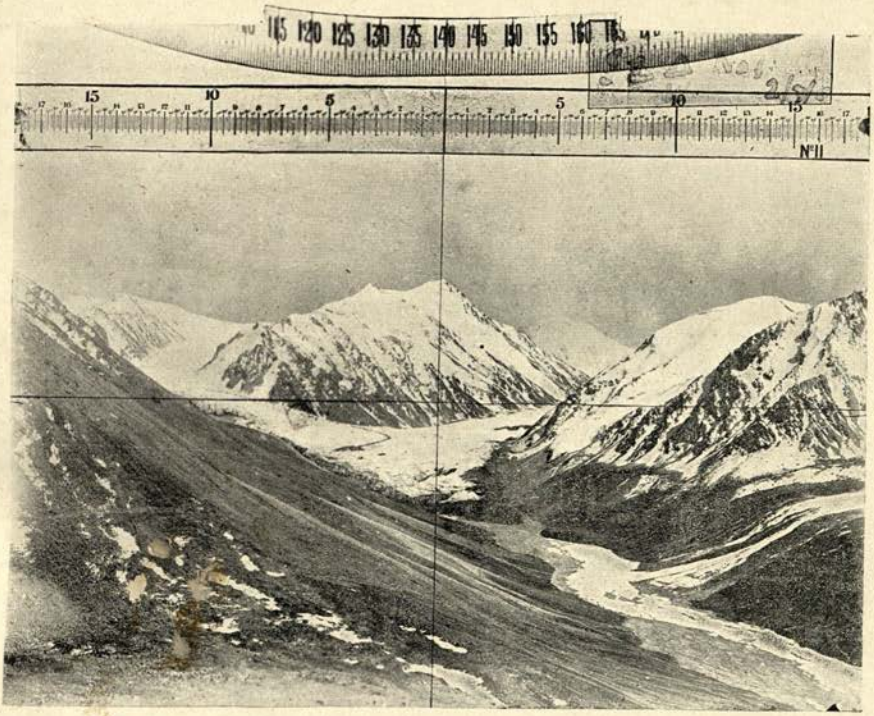
A short distance further up the main valley, on one of the small but highly cultivated plateaus overhanging the left bank of the river, there stands near the village of *Thol*, a well-preserved Buddhist Stūpa of undoubted antiquity (*see* Photograph 1). It rises to a height of nearly 20 feet from a base which measures 10 feet square, and is built of solid masonry. The only damage it has sustained is at one corner of the base, where the masonry has been broken to save a detour of a few feet to the recently built road. This interesting little structure is the only pre-Muhammadan monument I was able to hear of in Hunza. But there can be no doubt that this secluded valley, so long inaccessible to outside influences, with its small population apparently wholly isolated in regard to language and ethnic origin, contains much that would deserve careful examination by the ethnographist and historical student.

I reached Aliābād, near the capital of the Hunza Chief, by a forced march late on the evening of the 17th June, and was during the next two days fully occupied with the rearrangement of all loads for transport by coolies. The difficult mountain tracks by which the watershed between the Hunza River and the Tāghdumbāsh Pāmīr is approached during the summer months are impracticable for any beast of burden, and the further transport of our baggage had therefore to be effected by men. Acting on the instructions kindly sent in advance by the Political Agent, Gilgit, Wazīr Hūmāyūn, the chief adviser of Muhammad Nāzim, the present Mīr of Hunza, had made excellent preparations for the difficult route ahead. The 50 odd hillmen required for the carriage of our *impedimenta* up to the Chinese frontier had been duly collected, and arrangements made for their relief at intermediate stages. Through the Wazīr I also engaged two men of the "Hunza Levies," who had been before on the Pāmīrs, and who proved subsequently most useful as local guides. It was difficult to realise that this little mountain chieftainship, which now provides so effectually for all needs of the European traveller, was, until ten years ago, by the freebooting and slave-raiding expeditions it sent forth, the terror of all neighbouring regions.



RUINED STŪPA AT THOL, HUNZA VALLEY.

2.



GLACIERS AT OXUS SOURCE (VIEW TAKEN WITH PHOTO-THEODOLITE).

On the 20th June I moved my camp to *Baltit*, where I paid a return visit to the Mīr, in his old and highly picturesque castle. I was interested to note, in the carved woodwork of mosques and other structures, decorative elements of distinctly ancient Indian type, while much in the furniture and fittings of the Mīr's residence plainly betokened Central-Asian and Chinese influences. On the following day we commenced on foot the series of trying marches up the gorge of the Hunza River. The winter route, which crosses the river-bed at frequent intervals, had become wholly impracticable owing to the melting snows and the swollen state of the river. The tracks which lead over the precipitous mountain spurs and the great glaciers descending to the left bank of the river, often over narrow rock ledges and by rough ladder-like galleries (rafīk), represent a succession of Alpine climbing tours of considerable difficulty. A full and accurate description of this route, which vividly brought back to my mind the accounts left by Fa-hien and other old Chinese pilgrims of their experiences on the journey through the gorges of the Indus, has already been given in LORD CURZON's Memoir on the Pāmīrs.[1] From Ghulmit, the second stage, onwards the scanty population of hillmen occupying the few patches of cultivated ground in the valley proved to be of Iranian origin, speaking the *Wakhī* tongue, and distinct from the Hunza people proper. Their dialect seems closely to agree with that spoken by the Wakhān immigrants settled in Sarīkol, of which specimens have been collected by Mr. Shaw. It is thus seen that in this part of the Hindukush the outlines of the great linguistic areas keep as little to the geographical watershed as they do further to the west.

Survey on Tāghdumbāsh Pāmīr.

After six days of continuous marching or climbing, *Misgar* the northernmost village of Hunza was reached, and, on the 28th June, at last we crossed by the *Kilik* Pass (circ. 15,800 feet above sea level) into Chinese territory on the Tāghdumbāsh Pāmīr. Sarīkolī herdsmen sent by the Chinese authorities at Tāshkurghān, according to Mr. Macartney's arrangements, had met me at the southern foot of the pass, and their Yaks proved most useful for transport purposes and survey excursions. From Kök-török, our first camp on the Tāghdumbāsh, at an elevation of over 14,000 feet, the plane-table survey, on the scale of 8 miles to the inch, was commenced. It was supplemented throughout our travels in the mountains by photogrammetric work, for which

[1] See *The Pamirs and The Source of the Oxus*, "The Geographical Journal," 1896, pp. 8 *sq.*

I used the Bridges-Lee photo-theodolite, wherever the configuration of the ground and the atmospheric conditions allowed its employment within the limited time available. Systematic triangulation by theodolite was started at the same time with the help of the points supplied by the surveys of the Pāmīr Boundary Commission and Captain Deasy, while regular astronomical observations for latitude were made at all camps the exact determination of which possessed topographical interest.

In connection with the plane-table survey, which was carried on throughout by Sub-surveyor Ram Singh under my direct supervision, I paid special attention to the local nomenclature. This possesses particular interest on the Pāmīrs, as it reflects the mixture of the Turkī and older Iranian elements in the population. The frequent doublets in the names of localities, which were noted in Sarīkol, are due to this historical reason and often account for the strange variations in the records of earlier travellers. Every care was taken in this region as well as along all routes subsequently followed to make the record of local names reliable and also exact in regard to phonetic transcription. In view of the imperfections of the earlier materials, to which Professor A. Vámbéry, the eminent Turkologist, had previously drawn my attention, this feature of the new survey will, I hope, be appreciated by philologists as well as by geographers.

From the height of the *Khushbēl* Peak, (about 16,800 feet above the sea) which served as the first "hill-station" of our survey, I could see simultaneously the ranges which form the watershed between the drainage areas of the Indus, the Oxus, and the Yarkand River and which politically divide the territories of British India, Russia, China, and Afghanistan. The *Wakhjir* Pass, only some 12 miles to the south-west of *Kök-török*, connects the Tāghdumbāsh Pāmīr and the Sarīkol Valleys with the head-waters of the Oxus. Over it there must have passed since ancient times an important line of communication between Chinese Turkestan and the Iranian territories on the Oxus. So I was glad that the short halt, which was unavoidable for survey purposes, permitted me to move a light camp close to the summit of the Wakhjīr Pass (circ. 16,200 feet). On the following day, July 2nd, I visited the head of the *Āb-i-Panja* Valley, near the great glaciers which Lord Curzon first demonstrated to be the true source of the River Oxus (*see* Photo-theodolite view, 2). It was a strange sensation for me in this desolate mountain waste to know that I

had reached at last the eastern threshold of that distant region including Bactria and the Upper Oxus Valley, which as a field of exploration had attracted me long before I set foot in India. Notwithstanding its great elevation, the Wakhjīr Pass and its approaches both from west and east are comparatively easy. Comparing the topographical facts with Hiuen-Tsiang's account in the *Si-yu-ki*,[1] I am led to conclude that the route followed by the great Chinese pilgrim, when travelling about A.D. 649 from Badakhshān towards Khotan, through "the valley of Po-mi-lo (Pamir)" into Sarīkol, actually traversed this Pass.

It was on the day which I spent on this westernmost border of the Chinese empire that I received by telegrams forwarded from Gilgit the first news of the great events which were convulsing the capital in the distant east. Luckily neither here nor during my subsequent travels could I discern any cogent reason to change my plans on account of these political troubles.

Ancient topography of Sarīkol.

A five days' journey down the gradually widening valley of the Tāghdumbāsh Pāmīr brought me to *Tāshkurghān*, the chief place of the mountain tract known as *Sarīkol*, and undoubtedly of considerable antiquity. While with the help of M. Shēr Muhammad, the energetic political Munshī stationed here as an assistant to Mr. Macartney, fresh transport and supplies were being got ready for the onward journey, I was able to collect much information on points of historical and antiquarian interest. The identification of Sarīkol with the *K'ie-p'an-to* territory of Hiuen-Tsiang, first suggested by Sir Henry Yule, was found to be fully borne out by the close agreement of the position and remains of Tāshkurghān with the description which Hiuen-Tsiang and the earlier pilgrim Sung-yun (circ. 500 A.D.) give of the old capital of that territory. The ruined town, which extends around the modern Chinese fort of Tāshkurghān (see Photograph 3) still showing a quadrangular enclosure of massive but crumbling stone walls, "rests on a great rocky crag and is backed by the River S'ītā" (*i.e.*, the Yarkand River) on the east, exactly as the pilgrims describe it. I was able to make an exact survey of the site and also to trace the probable remains of the ancient Stūpa, which local tradition ascribed to King As'oka, in a high mound outside the north wall of the town.

[1] See *Si-yu-ki, Buddhist Records of the Western World*, translated by Beal, ii., pp. 297 *sq.*

More lasting than the various Buddhist buildings which Hiuen-Tsiang mentions, the local legends have proved to be. The story recorded by him of the princess who, sent from China to marry the King of Persia and detained by warlike operations in this territory, was placed for safety's sake "on a solitary mountain peak,"[1] still clings to a locality known as *Kizkurghān* ("the daughter's tower"), some 40 miles above Tāshkurghān. There a rugged rocky eminence on the left bank of the Tāshkurghān River, not far from the watch station of Ghujakbai (the "Ujadbhai" of some maps), bears remains of massive stone walls which the local legend of the Sarīkolīs and Kirghiz connects with a Persian princess whom her father King Naushīrwān, the hero of the Persian epic, had confined there. Reminiscences of ancient Iranian lore linger elsewhere about Sarīkol. Thus the high mountain ridge to the south-east of Tāshkurghān, where a legend told to Hiuen-Tsiang located the burial place of the miraculously begotten son of that princess, the first king of the territory, bears the name of *Afrāsiāb*. The name *Varshadch*, used as an old designation of Tāshkurghān and its neighbourhood by the inhabitants speaking Sarīkolī (a dialect closely akin to Wakhī), is also clearly of Iranian origin.

Site of Tāshkurghān.

I believe that Tāshkurghān as an historical site has claim to greater antiquity even than that implied by the notices of Sung-yun and Hiuen-Tsiang. Nature itself has plainly marked it not only as the administrative centre for the valleys forming the Sarīkol region, but also as the most convenient place for trade exchange on an ancient and once important route connecting great portions of Central Asia with the far East and West. As far as local observations go, everything tends to support the view first expressed by Sir Henry Rawlinson, that Tāshkurghān, "the Stone-tower," retains the position as well as the name of the λίθινος πύργος which Ptolemy, and before him Marinus of Tyre, the geographer, knew as the emporium on the extreme western frontier of Serikē, *i.e.*, the Central Chinese dominions. From Tāshkurghān the road lies equally open to Kashgar and Khotan, and thus to both the great routes which lead from Turkestan into the interior of China. Here also the two best lines of communication across the Pāmīr converge. The Tāghdumbāsh Valley, giving direct access to the Upper Oxus, is met by the route which

[1] See *Si-yu-ki*, transl. Beal, ii., p. 300 *sq.*

3.

CHINESE FORT WITHIN RUINED TOWN OF TĀSHKURGHĀN.

4.

MUZTAGH-ATA PEAKS FROM LITTLE KARAKUL LAKE.

crosses by the Naiza-Tāsh Pass toward the "Great Pāmir," and thence leads down to Shighnān.

Survey of Muztāgh-Ata range.

In order to extend our survey over ground that was geographically interesting, I chose for our further march to Kashgar the route which passes through the high valleys between the Russian Pāmīrs and the western slopes of the great transverse range of the Muztāgh-Ata. Starting from Tāshkurghān on the 10th July, I marched through the most northernmost Sarīkol valleys to the "Little Karakul" Lake. Before finally leaving the scattered alpine settlements of Sarīkol, I made a considerable number of anthropometric observations among the Iranian hillmen who inhabit them. Transport arrangements were greatly facilitated by the ample supply of Yaks which we obtained from the nomadic Kirghiz herdsmen grazing near the Little Karakul, and it thus became possible within a comparatively short time to establish a series of excellent survey stations on the high spurs of the Muztāgh-Ata. By their means the triangulation brought up from the Tāghdumbāsh was extended to the great glacier-crowned ranges to the north and north-east overlooking the Little Karakul Lake and the valley which drains it. Individual peaks in these ranges rise above 24,000 feet, and seem almost to rival the great Muztāgh-Ata. The photo-theodolite proved particularly useful in surveying the details of this grand mountain scenery. On the slopes of the central *massive* of "the Father of ice mountains" (see Photograph 3), I made two ascents for the same purpose. The maximum elevation reached was over 20,000 feet, the hypsometer reading 177·8° F. at a temperature of 33° F., on the ridge which flanks the Yambulak Glacier from the north. Heavy masses of snow, which appear to have been accumulating since Dr. Sven Hedin's visit in 1894, were found to envelop this ridge from circ. 15,500 upwards, and together with the unfavourable weather greatly impeded the ascent. Yaks with their Kirghiz attendants had soon to be left behind, and without my two Hunza men, who proved excellent climbers and guides, the attempt would have had to be abandoned at a far lower point. It was curious to note that the Kirghiz legend of a hoary Pīr (saint) mysteriously residing on the inaccessible heights of the great ice-mountain still retains distinct features of the "old story" which Hiuen-Tsiang heard of the giant Bhikshu, who was seen entranced on "a great mountain covered

with brooding vapours" situated to the west of *U-sha* and evidently identical with Muztāgh-Ata.[1]

On the 23rd July I started from the inhospitable neighbourhood of the Muztāgh-Ata peaks to march down to the plains of Kashgar by the route of the *Gez* defile. The collapse of one of the bridges in this narrow and difficult gorge necessitated a considerable detour and the crossing of the great *Koksēl* Glacier. As the lower portion of the defile was rendered altogether impassable by the summer floods of the glacier-fed Yamanyār River, it was necessary to take to the track leading over a series of steep transverse spurs known as "Tokuz-Dawān" ("the nine passes"). These marches were trying to man and beast, but afforded welcome opportunities for mapping the little-known eastern slopes of the great snowy range north of Muztāgh-Ata. Having pushed ahead of my heavy baggage and the Sub-surveyor's camp, which followed by easier stages, I entered, on the 28th July, the open plains of the great Turkestan basin at Tāshmalik, and a fifty miles' ride on the following day brought me safely to Kashgar, where under Mr. Macartney's hospitable roof a kindly reception awaited me.

Preparations at Kashgar.

Several important considerations combined to prolong my stay in the capital of Chinese Turkestan. After fully two months of fatiguing and almost incessant mountain travel some bodily rest seemed needed before we could set out for Khotan and the proper goal of my explorations. Availing myself of the experienced advice of Mr. Macartney, and of the practical help furnished by his establishment, I decided to organise at Kashgar both the personnel and the transport of the fresh caravan required for my travels about Khotan and in the desert. I realised that my chances of success in covering within the limited period of a single season the whole of the wide area I desired to visit, depended largely on a careful selection of the men and animals that were to make up my party. It was necessary to limit the baggage with a view to rapidity of movement, and at the same time to ensure that all stores and equipment required during travels likely to spread over eight months, and under widely varying climatic conditions, should be kept within easy reach. I found that, including riding animals, eight camels and twelve ponies would be needed for my caravan. The trouble taken about their

[1] See *Si-yu-ki*, ii., p. 350.

selection was amply repaid by the result. For notwithstanding the fatigues implied by our subsequent travels, which covered an aggregate of more than 3,000 miles, none of the animals I brought from Kashgar ever broke down. The number of followers was also kept down to the indispensable minimum, the party including two camel-men, two pony attendants, one of whom acted also as Chinese interpreter, a cook and a personal servant for myself, and a Rājpūt cook for the Sub-surveyor. Apart from the latter servant, faithful Jasvant Singh, who had accompanied us from India, all the men engaged came from Kashgar or Yarkand.

An important object of my stay at Kashgar was to familiarise the provincial Chinese Government with the purpose and character of my intended explorations and to secure their goodwill, which I realised would be an indispensable condition for the practical execution of my plans. The efforts in this direction which Mr. Macartney undertook on my behalf, proved entirely successful, owing largely to the personal influence and respect he enjoys among all Chinese dignitaries of the province. After a series of interviews and a lengthy correspondence with the *Tao-tai*, or Provincial Governor, this high official agreed to issue to the *Amban*, or District Magistrate, of Khotan instructions likely to assure me all needed assistance in regard to transport, supplies, and labour, as well as full freedom for my movements and researches. The result showed that the Tao-tai faithfully carried out his promise, and that Mr. Macartney's representations, coupled with what explanations I could give through him of the historical connection of ancient Indian culture and Buddhist religion with Central-Asia, had effectually dispelled any doubts and suspicions which might otherwise have been roused by the intended excavations, &c. In this respect my references to the *Si-yu-ki*, the records of Hiuen-Tsiang's travels, proved singularly helpful. All educated Chinese officials seem to have read or heard legendary accounts of the famous Chinese pilgrim's visit to the Buddhist kingdoms of the "Western countries." In my intercourse with them I never appealed in vain to the memory of the "great monk of the T'ang dynasty" (*T'ang-Sêng*), whose footsteps I was now endeavouring to trace in Turkestan as I had done before in more than one part of India.

The valuable help I received from Mr. Macartney during my one month's stay at Kashgar was not restricted to smoothing my relations with the Chinese administration, and to the kind hospitality he accorded me at Chīnī Bāgh,

his residence. His long experience of the country and its people and his keen observation enabled him to give me a great deal of information which proved most useful to me when studying the economic and social conditions and their relation to the past. While busily occupied with practical preparation, including many repairs and additions to our camp outfit, developing of photographs taken on the previous journey, &c., I took occasion to continue my Turkī studies, and to make a close survey of the ancient remains at and near Kashgar.

Ancient remains at Kashgar.

Though undoubtedly situated within the ancient territory of *Kie-sha*, described by Hiuen-Tsiang as possessing hundreds of Buddhist monasteries, and probably occupying a site close to its old capital, which was known to the Chinese as Su-li, Kashgar has preserved few remains of the pre-Muhammadan period. The most conspicuous of these is a much decayed mound of sun-dried brick masonry which rises over the deep-cut northern bank of the Tümen-Daryā, about $1\frac{1}{2}$ miles to the north-east of Chīnī Bāgh and the Russian Consulate. It is simply known as *Tim* ("mound"), and undoubtedly represents the remains of an ancient Stūpa. Careful measurements showed the present height of the masonry to be 85 feet, and the diameter of the base, the exact form of which can no longer be ascertained, to be about 160 feet from E. to W. As great masses of the soft brickwork have fallen or crumbled away, it is impossible to form a clear idea of the form of the whole Stūpa or exactly to fix its centre. The bricks seem to have been of a large size, about 18 inches square and 5 inches thick. On the N.E. side the hemispherical outlines of solid masonry are visible under a mass of brickwork, which seems to belong to a kind of outer mantle, possibly indicating a later enlargement of the Stūpa dome. But the whole structure proved far too decayed to permit a tentative restoration or to justify excavation. It is a curious fact, deserving to be noted in connection with the observations I subequently made at the site of the ancient Khotan capital, that fully 15 feet of the masonry base lie below the level of the surrounding fields. This is clearly seen on the west face, where a small Nullah formed by erosion runs round the foot of the mound. The conclusion indicated thereby as to the rise of the general ground level, probably through alluvial deposit, is borne out by the fact that, according to Mr. Macartney's information, fragments of pottery and also large jars were

found some years ago embedded in the loose soil near the mound, several yards below the present level of the fields.

The remains of another ancient Stūpa, also reduced to a shapeless mound of brick, but smaller in size, are found on the left bank of the Kizilsu River, about 1½ miles from the south face of the city wall. The mound, which is known as *Kizil-debe* ("the red hill"), rises to a height of 27 feet from the level of the surrounding fields. The base of the original structure seems to have been a square of at least 120 feet. The sun-dried bricks of which it is built measure about 17 inches square, with a thickness of 3 inches. A low and flat mound immediately to the west of "Kizil-debe," which might possibly have been formed by the ruins of some monastic building, is now covered with graves, evidently of Muhammadan date.

Ruins of Khān-ui.

By the close of August my preparations had sufficiently advanced, and the great summer heat of the plains had sufficiently abated, to permit of the survey of a series of ruins situated on the barren *Dasht* beyond the little hamlet of *Khān-ui* ("the Khān's residence"), some 24 miles by road to the north-east of Kashgar. Their existence had first been mentioned to me by the Chinese City-prefect of Kashgar. At this "Kōneshahr" or "ancient city," as every old site or structure is indiscriminately designated in Chinese Turkestan, I saw for the first time a stretch of desert ground strewn with small fragments of ancient pottery and glass ware, the result of continual erosion by wind and sand among the débris of habitations long ago destroyed. The sight was subsequently to become familiar to me on the line of ancient settlements in the desert around Khotan. *Hasa Tam*, as this waste site is called, is supposed by local tradition to have been once the capital of a "Chinese Khākān," until the great Satōk Boghra Khān, the establisher of Islām in Kashgar, destroyed it. A few miles beyond the eastern edge of the pottery-strewn ground I found a much-decayed Stūpa mound, still rising about 28 feet above the present ground level, and close to it the traces of a great quadrangular building, measuring 260 by 170 feet, which enclosed an open court, and was in all probability the Vihāra attached to the Stūpa.

About four miles to the north of Hāsa-tam and beyond a dry ravine, which at times of exceptional flood in the mountains still receives water

from the Little Ārtush Valley, there rise the better preserved ruins of *Mauri-Tim*. They stand on the edge of a low spur which descends from a bleak hill range northwards, and are thus visible for a considerable distance, even in the dust-laden atmosphere of a Turkestan summer. The most conspicuous object is a Stūpa, which has suffered comparatively little damage, and is of particular interest as showing clearly the architectural proportions. The exact plan and elevation which I prepared, and which I hope will be published in my final Report along with all other materials of this kind, will indicate all details of the structure. Here it must suffice to mention that the Stūpa has a square base, formed by three successively receding stories, the lowest measuring 40 feet on each side. On the top story rises a circular base 5 feet high, and over it a drum also 5 feet high, which is decorated with bold projecting mouldings and again bears the proper Stūpa dome. This measures 16 feet in diameter and appears to have been originally hemispherical. The total present height of the structure is 36 feet. The fairly hard plaster with which the whole Stūpa was undoubtedly coated, still adheres on the S.E. side, which also shows in perfect preservation some of the woodwork (tamarisk) inserted to support the projecting mouldings. Elsewhere the solid masonry of sun-dried bricks is exposed, each brick measuring about 16–17 inches square, with a thickness of $3\frac{1}{2}$ inches.

The stability of the whole structure has scarcely been impaired by the great cutting effected on the S.W. side, evidently long ago. This cutting has laid bare a square shaft running into the centre of the Stūpa, and widening within the dome into a little chamber, 4 feet square and at present $5\frac{1}{2}$ feet high. It is highly probable that this central shaft or chamber served originally for a relic deposit. It was invariably found in the Stūpa ruins that I subsequently discovered. In this respect as well as in their general architectural features, all Stūpas I have been able to examine in Chinese Turkestan show a very close relation to the similar monuments extant in Afghanistan and on the Indian North-West Frontier.[1] That these conspicuous structures were in every case found to have been systematically opened in search of treasure is scarcely surprising, in view of the wholesale spoliation of ancient monuments which has gone on in Eastern Turkestan

[1] *See* my "Report on an Archæological Tour with the Buner Field Force," p. 40; also my notes in the *Indian Antiquary*, 1900.

during Muhammadan times, as attested for various localities, from Kashgar to Khotan, by curious records in Mirzā Haidar's Tārīkh-ī Rashīdī.

Behind the Stūpa, and on the same low ridge, rises a great oblong mound of solid masonry to a height of 34 feet. Three stories with traces of cells or rooms built into the brickwork, which seem to indicate occupation as a Vihāra, are roughly recognisable. But the whole exterior has decayed too much to permit of any certainty in determining the character of the structure. Nor is there in the scattered ruins of small houses found close by anything to guide us as to the date of these buildings. Ancient Chinese coins are said to occur in the vicinity, but no authentic finds have come to my notice.

Journey to Khotan.

On the 11th September I finally left Kashgar for the journey to Khotan. Avoiding the ordinary caravan route, I chose for the march to Yarkand the track which crosses the region of moving sands around the popular shrine of Ordam Pādshāh. This gave me some practical experience of the conditions under which our subsequent desert marching was to be conducted, and also enabled me to fix the position of that curious pilgrimage place more accurately than is shown in existing maps. At Yarkand I was obliged to make a halt, as owing to the earlier departure of the caravans bound for Ladāk, unexpected delay arose about the purchase of the Chinese silver cash with which I had to provide myself for the work of the winter. I utilised our stay at Yarkand to collect Persian and Turkī texts bearing on Turkestan history, as well as reliable information about old localities along the route to Khotan. From the latter place had come what little in the way of ancient coins, seals, and similar "antiques" was to be found in the Yarkand Bāzārs.

On the 27th September I was able to start again, and a few days later at the little town of Karghalik to complete the arrangements both for our cash supply and the winter outfit of my men and animals. The route we now entered, which leads to Khotan along the southern edge of the great desert, had for me a special historical interest. The great stretches of stony or sandy *Dasht* through which most of the route passes, could never have been anything but a waterless uninhabited waste. Yet there was to be found clear evidence that all along we were following the same great thoroughfare by which in earlier times the trade from the Oxus region and the far West passed to Khotan and to China.

Ancient sites on route to Khotan.

Halfway between the small oases of Gūma and Mōji, watered by hill streams which soon lose themselves in the sand, I found close to the present road a fairly well-preserved little Stūpa, measuring 41 feet square at its base. On the same march I passed for the first time extensive patches of ground where the eroded loess is thickly strewn with fragments of coarse pottery, bricks, slag, and similar refuse marking the sites of villages and hamlets long ago abandoned. It is impossible to give here a detailed account of the features peculiar to such sites, locally known as *Tatis*, which I traced so frequently beyond the limits of the present cultivated area in the whole Khotan region. They exhibit everywhere most striking evidence of the powerful erosive action of the winds and sand storms which sweep the desert and its outskirts for long periods of the spring and summer. The above-named fragments, which often cover the ground for square miles, as in the vicinity of Mōji and to the north-east of Jiya in the Khotan oasis, rest on nothing but natural loess, either hard or more or less disintegrated. They alone, by the hardness and weight of their material, have survived, sinking lower and lower as the ground beneath gets more and more eroded, while everything in the shape of mud walls, timber, &c. as ordinarily used in the construction of Turkestan houses, has long ago decayed or been swept away. This erosion of the ground does not proceed uniformly over a whole area, as shown by the small banks of loess rising here and there from the general level of a *Tati*, sometimes to a height of 10–15 feet. Such banks are usually covered more thickly with hard débris, or show other features which may explain the slower progress made in their case by erosive action.

Coins, much corroded metal objects and similar small articles which can withstand the force of the winds, are picked up occasionally from these sites. There was a special reason for me to study the country closely on my way to Khotan. Islām Ākhūn, the Khotan "treasure-seeker" from whom most of the manuscripts and block-prints "in unknown characters" contained in Dr. Hoernle's and other collections were acquired, had in the statements recorded at Kashgar by Mr. Macartney, and reproduced in Dr. Hoernle's "Report on the British Collection of Central-Asian Antiquities," specified a series of localities from which his finds were alleged to have been obtained. Most of these were described as old sites in the desert north of the

[1] *See* Part I., pp. xvi., *sq.*

caravan route between Gūma and Khotan. In the course of the detailed inquiries I made on my march to Khotan, I ascertained that the localities named by Islām Ākhūn were either wholly unknown, or else mere *Tatis* like the pottery-strewn ground near the little desert shrine of Kara-kul Mazar, which I visited from Gūma. Nothing had ever been heard of the discovery of manuscripts or "books" on such *Tatis*, and the physical conditions I invariably observed seemed to preclude the possibility of such relics surviving there. This negative result, coupled with other information about Islām Ākhūn which had reached me at Kashgar, was useful warning as to the value of this "treasure-seeker's" statements, and the genuineness of his "finds."

Mōji seems to occupy the position indicated by Hiuen-Tsiang for the town of "Po-kia-i," where a famous Buddha statue brought from Kashmir was worshipped in the pilgrim's time. It certainly must have been a flourishing place in the early Muhammadan period, as testified by the numerous copper coins extracted from the débris-strewn site of *Tögujai* close to the main village of Mōji.

Ancient localities on Khotan frontier.

Marching further to the east by the same road which Hiuen-Tsiang must have followed, I noticed other old sites near the little oasis of Zangūya, and the remains of a large but much-decayed Stūpa, known as *Karakīr-Tim*, about five miles to the north-west of Piālma. The stretch of sandy desert which is crossed to the east of Piālma marks the frontier of the Khotan district. A strange Muhammadan shrine, popularly known as *Kaptar-Mazar* ("the pigeons' shrine"), which stands in the midst of the sand-dunes, afforded the first striking proof of the tenacity of ancient local tradition in this region. Hiuen-Tsiang tells us that to the west of the capital of Khotan, 150–160 li (circ. 30 miles), "in "the midst of the straight road across a great sandy desert there is a "succession of small hills" which were supposed to be formed by the burrowing of rats.[1] These rats were worshipped with offerings by all wayfarers, owing to the popular belief that in ancient times they had saved the land by destroying the leather of the harness and armour of a great Hiung-nu force which was ravaging the border. The locality indicated corresponds exactly to the position of the Kaptar-Mazar relative to ancient Khotan, amidst dunes and low conical sand hills covered with tamarisk

[1] See *Si-yu-ki*, ii., p. 315.

bushes, while the manner in which thousands of pigeons kept at the shrine are propitiated with food offerings by all modern wayfarers, manifestly marks a survival of the local legend of Buddhist times. Just like Hiuen-Tsiang's rats, so now the holy pigeons which have taken their place in Muhammadan legend are supposed to recall the memory of a great victory, won by a Musulmān hero over a host of Khotan unbelievers.

Arrival at Khotan.

On the 12th October I reached *Khotan* town or Ilchi, the present capital of the territory which was to form the special field for my archæological work. I lost no time before commencing the local inquiries which were to guide me as to the sites particularly deserving exploration and as to the best means for organising a systematic search for antiquities. Apprehensions about possible forgeries, which experience soon showed to have been justified, had prevented me from sending in advance to Khotan information as to the object of my journey. I now found that some time would have to be allowed for the collection of specimens of antiquities from the various old sites which "treasure-seekers" were in the habit of visiting. On the other hand the vagueness of all information that could be obtained about such sites, even from persons who seemed reliable, convinced me that if I were to set out without having such specimens before me, much valuable time might be lost and unnecessary expense incurred. Badruddīn Khan, the Aksakāl (headman) of the Afghan merchants at Khotan, and himself a large trader to Ladāk, who had previously rendered useful services to Mr. Macartney, offered to organise and send out these small "prospecting" parties. Their return could not be expected before a month, and I decided to utilise this interval for a geographical task which I knew to possess special interest and to which my attention had particularly been called by the Survey Department.

Survey in Kuen-luen range.

Our knowledge of that portion of the *Kuen-luen* range which contains the head-waters of the Yurung-kāsh or Khotan River, has so far been very scanty, having been practically restricted to the sketch-map of the route by which Mr. Johnson, in 1865, had made his way from Ladāk down to Khotan. Colonel Trotter in his report on the topographical work of the Yarkand Mission of 1873, had already surmised that the head-waters of the Yurung-kāsh were much further to the east than shown on that map, and probably identical with a stream rising on the high plateau south of Polu. Captain Deasy, working

from the side of Polu in 1898, succeeded in reaching this stream at an elevation of close on 16,000 feet, but was prevented from following it downwards. Thus the true course of the main feeder of the Yurung-kāsh where it cuts through the Kuen-luen range, together with most of the orography of the surrounding region, still remained to be explored.

The close approach of winter obliged me to set out for this task as soon as possible. Though only a few days were thus available between my first arrival in Khotan and my start for the mountains, I succeeded in paying a preliminary visit to the village of Yōtkan, where the excavations to be noticed below have brought to light the site of the ancient capital. I also obtained indisputable evidence that forging of "old books" had quite recently been practised at Khotan. A Russian Armenian had, as a commercial speculation, purchased a manuscript written "in unknown characters" on birch-bark leaves and alleged to have been found in the desert. Having been made to pay 50 roubles for it, he brought it to me for examination. I saw at once that the birch-bark leaves had never received the treatment which ancient *Bhūrja* manuscripts so well known to me from Kashmir invariably show, and which alone makes the material suitable for permanent records. Nor had the forger attempted to reproduce the special ink which is needed for writing on birch-bark. On my applying the "water-test" the touch of a wet finger sufficed to take away any of the queer "unknown characters," both written and block-printed, with which the leaves were covered. It was significant that the "printed" matter showed a close resemblance to the formulas of the "block-prints" reproduced in the plates accompanying the first part of Dr. Hoernle's Report on the Collection of Central-Asian Antiquities, and that my inquiries traced a close connection between the person from whom the Armenian had purchased the leaves, and Islām Ākhūn, the treasure-seeker already mentioned. Local rumour credited Islām Ākhūn, in fact, with having formerly worked a small factory for the production of "old books." But at the time he was keeping away from Khotan, and there were reasons to postpone personal investigations about him.

On the 17th October I started with the lightest practicable equipment for the mountains. No objections were raised by the Chinese administration to exploration in that direction, though at one time in Kashgar it had looked as if there were reasons to apprehend them. On the contrary, Pan-Darin,

the Amban of Khotan, did all that was needed to facilitate my arrangements for transport and supplies. Subsequent experience showed me that without the ever ready assistance of this amiable and learned Mandarin neither the tour through the mountains nor the explorations in the desert which followed it could have been accomplished.

Exploration of Upper Yurung-kāsh.

The valley of the Yurung-kāsh becomes impassable within one march from its debouchure into the plains. Hence the route from Khotan to *Karanghu-tāgh*, the southernmost inhabited place, leads over a series of ranges that separate side valleys draining from the east. On the first range which we crossed, at an elevation of about 11,300 feet, no distinct view could be obtained owing to the effects of the dust-haze rising from the desert-plains. But the next range, above Buya, offered a very extensive panorama. In a grand glacier-girt mountain, rising in solitary splendour to the south-east, it was impossible to mistake the "Kuenluen Peak, No. 5," already triangulated from the Ladāk side. The few Tāghliks ("hill-men") in the neighbouring valleys, know no other name for it but *Muztāgh*, "the ice-mountain." South of this great peak, for which the tables supplied by the Survey Department indicated the height of 23,840 feet, a magnificent range of snowy mountains was seen, forming the watershed towards the westernmost portion of the Aksai-chin plateau. Its crest-line seemed nowhere to fall below 19,000 feet, but none of its peaks can rival the grand cone of "Kuen-luen No. 5." It soon became clear that the main Yurung-kāsh stream has cut its way between this great peak and the range which is flanked by it on the east.

On the last of the outer ranges we found an excellent station, at an elevation of about 13,400 feet, for surveying the valleys of the numerous glacier-fed streams which join the main Yurung-kāsh from the south. Their courses, as well as that of the main river, lie in deep rock-bound gorges flanked by spurs of remarkable steepness. Owing to the rugged nature of the ground, the descent to the Yurung-kāsh proved almost impracticable for our baggage ponies. Fortunately it was possible to replace them by Yaks at *Karanghu-tāgh* ("the mountain of blinding darkness"), a small settlement of herdsmen, which, owing to its inaccessibility, serves also as a penal station for select malefactors from Khotan. The Kāsh River, on which Karanghu-tāgh lies, issues from a series of great glaciers below peaks that reach close to 22,000 feet, and joins the main Yurung-kāsh a few miles below the hamlet.

Yurung-kāsh River Gorge.

From there I endeavoured to follow up the gorge of the Yurung-kāsh as far as possible towards the south-east. The hill-men knew of no track leading to the head of the river; and indeed, after a two days' climb over very difficult ground, a point was reached (circ. 79° 59′ 30″ long., 36° 2′ lat.), where the river-gorge, winding round the mighty southern spurs of "Kuen-luen No. 5," became quite impassable for men and Yaks alike. Beyond this point, which is about 9,000 feet above the sea, the river, unfordable even in the late autumn, completely fills the narrow passage it has cut through the rocks. Accompanied by the Sub-surveyor and a few Tāghliks, I penetrated some miles beyond, along the extremely precipitous slopes that descend to the river from the high snowy ridges facing the great peak on the south. But our endeavours to find a practicable track for further advances were in vain, and ultimately we had to turn back. For a fresh attempt it would have been necessary to await the complete freezing of the river. But this eventuality could not be expected for another month, though the temperature at night went down to 16° Fahr. on the 27th October. Even then I doubt whether a practicable passage could be found. The uppermost portion of the river-course will, therefore, have to be explored from the south-east, where Captain Deasy appears to have found comparatively open ground near the source.

Survey of ranges towards Karakāsh R.

The survey so far effected had shown the configuration of this inhospitable but geographically interesting region to differ very considerably from the features which have been accepted by cartographers on the basis of the above-named sketch map. The route from Karanghu-tāgh to the north-west took me into a mountain tract that had so far remained wholly unexplored. Leaving Karanghu-tāgh on the 30th October by a path just practicable for laden Yaks, which forms its only connection with the outer world besides the route *viâ* Buya, we crossed a succession of high transverse ranges into the valleys of Nissa and Chash. By camping near the passes it became possible to climb to excellent survey stations, particularly on the *Brinjak* ridge, about 15,300 feet above the sea. But though we were favoured by exceptionally clear weather, the increasing cold and the exposure inseparable from such elevations made survey work very trying.

Beyond Chash the Yogan-Dawān Pass brought us to the drainage area of the Kara-kāsh River. Extreme disintegration of the rocks, aided apparently by peculiar climatic conditions, has produced here a perfect maze of deep-cut arid gorges, among which mapping was very difficult. Want of water, another serious obstacle in this region, could luckily be overcome by the transport of ice. The last pass to be crossed to the plains was the Ulūghat-Dawān (circ. 10,100 feet), south of Popuna on the Kara-kāsh River. Though much lower than the ranges previously traversed, it offered a more extensive view, which fulfilled a hope I had almost despaired of. This showed not only the whole of the ranges already surveyed, but beyond them, towards the Upper Kara-kāsh Valley, many high snowy peaks before hidden. Among them two peaks, already fixed by triangulation from the Ladāk side, could be identified with certainty. These points, in conjunction with "Kuenluen No. 5," made it possible to determine the position of the Ulūghat-Dawān station by theodolite and to measure angles to all prominent heights of the ranges within view. Another high ridge to the east, which we succeeded in climbing on the 10th November, offered an equally extensive view and enabled us to complete the triangulation just before a heavy dust-haze, raised by a storm that swept over the desert plains northwards, effaced all distant views for weeks and stopped the work. We had been only just in time. The prominent peaks in the outer range of hills immediately to the south of the town of Khotan had been fixed. With their help it was possible on our return in April to complete the long-sought-for connection of Khotan with the trigonometrical system of the Indian Surveys, which will give an exact determination of its longitude.

Triangulation of Khotan Mountains.

On the 12th November we reached the large village of Ujat, situated where the Kara-kāsh River debouches into the plain of Khotan. Here I was once more able to turn to archæological interests. Above the right river-bank immediately opposite to Ujat rises a low conglomerate spur known as *Kohmārī*. This, by its position and the cave it contains, is beyond all doubt identical with Mount Gośṛṅga mentioned by Hiuen-Tsiang as a famous pilgrimage place of Buddhist Khotan. M. Grenard, who as M. Dutreuil de Rhins' companion visited the spot and first made this identification, has already noticed how closely all points in Hiuen-Tsiang's description agree with the Kohmārī

Buddhist Shrine of Mount Gośṛṅga.

ridge. The much frequented Muhammadan shrine, supposed to contain the remains of a saint popularly called Khwōja "Mahēpujam," occupies in all probability the very site of the Saṅghārāma which was believed to commemorate a sermon of Buddha. But no old structural remains can be traced now. In a small cave in the steep cliff below, still visited by the pious as the saint's hermitage, it is easy to recognise the approach to the "great rock dwelling" where the popular legend of Hiuen-Tsiang's time supposed an Arhat to reside "plunged in ecstacy and awaiting the coming of Maitreya Buddha." The small upper chamber of the cave, measuring 13 by 8 feet on the floor, and approached from below by a rough ladder, shows above a narrow fissure running into the rock. The legend heard by the Chinese pilgrim represented this fissure as a passage which had been miraculously blocked by fallen rocks.

Apart from its association with Hiuen-Tsiang's visit, the Kohmārī cave possesses a special interest. From it the precious birch-bark leaves of the Dutreuil de Rhins Manuscript are alleged to have been obtained. M. Grenard's account shows that the leaves were delivered to him and his companion on two successive visits to Kohmārī by natives who professed to have found them with other remains inside the grotto. But it is equally clear that neither of them was present on the occasion or was shown the exact spot of the discovery. The French explorers were not allowed to visit the inside of the grotto, on the ground of alleged religious objections. No difficulty whatsoever was raised in my case. But the close examination I was able to effect of the cave and its rock walls has given me strong reason to doubt the possibility of the manuscript or any other ancient remains having really been found there. Reserving for my final Report a detailed account of the observations on which my doubts are based, I may point out that, though the visit of the French explorers was well remembered by the fairly intelligent Shēkhs of the shrine, nothing was known to them or the villagers of the discovery alleged to have been made in the cave. The transmission to Kashgar, and thence to St. Petersburg, of other fragments shows that the find was divided even before M. Dutreuil de Rhins heard of it. This suggests that the natives selling it had probably good reason to disguise the true place of discovery.

On the 16th November I returned to the town of Khotan, where owing to the fatigues which my men and ponies had undergone, as well as on

account of the numerous repairs required in the equipment after our rough travels through the mountains, a short halt became necessary. I utilised it for the examination and purchase of antiques, such as engraved stones, seals, and pottery, which had found their way from various localities of the district into the hands of the agents sent out on my behalf after my first visit. The small parties despatched to ancient sites in the desert also turned up during my week's stay with their spoil. The party which had gone out under the guidance of Turdi, an old and, as experience showed, reliable 'treasure-seeker,' had visited the most distant of the locally known sites, called by them Dandān-Uiliq. Among the specimens brought back by them I found to my great satisfaction pieces of fresco inscribed with Indian Brāhmī characters, small stucco relievos, representing objects of Buddhist worship, and also a small but undoubtedly genuine fragment of a paper manuscript in cursive Central-Asian Brāhmī. In the course of my inquiries it became manifest that the site which had furnished these objects would be the best place for commencing systematic excavation. But its great distance from the Khotan oasis, estimated at 9–10 daily marches, implied a prolonged absence. I accordingly decided to make previous to my start a thorough examination of old localities within the oasis itself, with a view to settling its ancient topography.

Old sites in Khotan oasis.

I first proceeded along the right bank of the Yurung-kāsh south of Khotan town, where jade-digging is still carried on after the manner described in the early Chinese Annals. The precious stone, which is chiefly won from the pebble beds deposited by the river on its debouchure from the mountains, accounts for the river's name (Yurung-kāsh, *i.e.*, "white jade") and has made Khotan famous throughout Eastern Asia. The compairatively full notices which the Chinese Annals furnish about *Yu-thien*, or Khotan, and its historical relations with the Empire since the days of the Han dynasty, are due directly or indirectly to the interest attaching to its jade-production.[1] It was hence not surprising to find in the vicinity of the jade-diggings two extensive débris-areas, or *Tatis*, of evident antiquity. One is near the village of Jamada; the other, known as Chalmakazān, is some eight miles higher up the river. A low and much decayed mound at the latter place, built of

[1] These notices, together with much valuable information about the jade trade, were first set forth in Abel Rémusat's book, *Histoire de la ville de Khotan*, Paris, 1820.

closely packed river stones and about 100 feet in diameter, probably represents the remains of a Stūpa. It has been dug into long ago.

Of far greater importance than these and similar "Tatis" on the outskirts of the oasis, are the ancient remains which gold-washing operations have brought to light below the fields of the little village of Yōtkan, some seven miles in a direct line to the west of Khotan town. This locality has furnished by far the greatest portion of antiquities, such as terra-cottas, seals, coins, &c., acquired at Khotan by former travellers. In their accounts it usually figures under the name of Borazan, the designation of the large canton in which the village is situated. M. Grenard was the first to recognise that the position of Yōtkan corresponds exactly to that indicated by early Chinese accounts for the ancient capital of Khotan, about midway between the Yurung-kāsh and Kara-kāsh Rivers. The detailed survey I was able to make of the site and the neighbouring localities during a prolonged stay at Yōtkan fully confirms this opinion, and has also enabled me to identify a series of other old localities which were visited and described by Hiuen-Tsiang in the vicinity of the capital.

Ancient remains at Yōtkan.

The antiquarian remains at Yōtkan are found embedded in layers of decomposed rubbish and humus, which show a thickness varying from an average of 5–8 feet to 13–14 feet in particularly rich banks. These "culture-strata" themselves are covered by a layer of pure soil, from 9 to 20 feet thick at various points. This appears to be due mainly to silt-deposit, the necessary result of intensive and long continued irrigation, and not to any great flood or similar catastrophe such as has been assumed by some earlier visitors. The reasons which have led me to this conclusion, and the observations which I made elsewhere in the Khotan district as to the gradual raising of the ground level through irrigation deposits, could be set forth only at some length and must therefore be reserved for my detailed Report. The overlying stratum of pure earth is everywhere easily distinguished from the "culture-strata." These, owing to the quantity of potsherds, decomposed wood, animal bones and similar refuse contained in them, invariably show a much darker colour. Their examination is greatly facilitated by the fact that the operations of the gold-washers have resulted in the gradual excavation of an extensive area. This forms roughly a square of half-a-mile, bordered on the north and south by the houses of the Khalche and Allāma hamlets, both belonging to Yōtkan. In order to work the ground

on the edge of the excavations the banks are cut away vertically by the diggers with the help of little watercourses conducted over them. The soil carried off is subsequently washed in rough sieves, when, besides the tiny flakes of gold which form the main proceeds, coins, gems, pieces of art pottery and similar small objects are extracted.

First discovery of Yōtkan site.

By careful inquiries among the old villagers I ascertained that the first discovery of gold dates back to some 36 years ago, when the small canal bringing water from the Kara-kāsh River for the irrigation of the Yōtkan fields, owing to a flood, began to cut itself a deeper bed in the soft soil. In the small ravine or *yār* thus formed, the first finds of gold were made amidst old pottery. They soon attracted parties from the floating population, which at Khotan makes a scant livelihood by gold-washing, jade-digging, or "treasure seeking." As the results were remunerative, the work was taken in hand, *i.e.*, monopolised, by Yāqūb Bēg's Khotan governor, Niāz Hākīm Bēg, in whose time the greatest part of the excavations was carried out. In recent years the limit of the "paying" strata seems to have been reached all along the edge of the dug-out area, except on the west and north-west, where the banks still yield an amount of gold just sufficient to reward the labour of the diggers at the moderate rate of 1 to 2 Khotan Tangas per diem.[1]

The time of the washing operations, which can be carried on only during the season of abundant water-supply from the river, *i.e.*, July to September, had long passed at the time of my visit. But I was able to acquire on the spot enough of the last year's output of antiques to form a clear idea of the remains which the parts of the site not yet exploited are likely to contain. My acquisitions comprise a considerable quantity of decorated pottery ware, among which are fragments of large jars as well as complete pieces ornamented in relievo; many quaint terra-cotta miniature images, representing men and various animals, particularly monkeys, of the kind which has already become familiar from previous collections, such as that reported on by Dr. Hoernle; a quantity of copper coins, among which the issues of early Khotan kings, showing both Chinese and Indian legends in Kharoshṭhī characters, are the most interesting; small relievos in metal and stone with representations of Buddha or Buddhist divinities; numerous seals engraved in a variety of precious stones, including jade, and invariably showing the direct influence of classical art, &c. There has not been time,

[1] The exchange value of a Khotan Tanga varies from ¼ to ⅓ of a rupee.

either during my travels or since, for a careful study of all these miscellaneous finds obtained from the Yōtkan excavations. Nor is it possible to find room in the plates attached to this Preliminary Report for their adequate representation. But the few specimens of terra-cotta ware shown on Plates I. and II. will help to illustrate the high standard reached by the art pottery of old Khotan, as well as the classical influence in its decorative motives. Figs. *A* and *B*, Plate I., show well-preserved small vases in a fine hard clay, the handle of the first being decorated with the figure of a monkey playing on a kind of guitar. Figs. *C*, *D*, *E*, and Fig. *B*, of Plate II., are fragments of larger vases. The head shown in *A*, Plate II., probably belonged to an ornamented handle. The small relievo carvings in stone shown on Plate XIII., Figs. *A*, *E*, *I*, which were also obtained at Yōtkan, show so close a relation to the Græco-Buddhist sculptures of Gandhāra as to suggest direct importation from the Indo-Afghan Frontier region. They are of interest as indicating one of the channels through which the influence of classical art may have reached this part of Central Asia. The small relievo, Fig. I., represents the scene of Buddha's birth from the side of Māyā; Fig. *A*, apparently some scene from a Jātaka legend.

Nowhere in the ancient strata examined at Yōtkan did I come upon traces of remains of buildings, nor could I hear of their ever having been found during previous excavations. This is easily accounted for by the fact that, owing to the total absence of suitable building stone, sun-dried bricks and clay supplemented by timber must have been in old days, just as now, the only conveniently obtainable materials for the construction of houses in the Khotan region. In a soil kept constantly moist by the percolation of irrigation water, such materials are bound to decay completely in the course of centuries. Only objects of exceptionally hard substance (terra-cotta, stone, metal) could escape decomposition. That these objects are mostly small or fragmentary is also readily explained. The débris layers of Yōtkan are composed of the rubbish gradually accumulating on a site which continued to be occupied by houses probably until after the Muhammadan conquest, and which was only abandoned by degrees. Objects of larger size and any practical utility were thus sure to be removed from the débris and to be utilised elsewhere.

The presence of gold in workable quantity in the "culture-strata" of Yōtkan, to which alone are due the excavations already described, at first

appears puzzling. Of course, most of the year's out-turn had already found its way to the melting pots of Khotan town. But I was able to secure and examine several specimens. These proved to consist of leaf-gold in tiny flakes, with an occasional small quantity of a kind of gold-dust. The villagers have no difficulty in distinguishing the gold found at Yōtkan, and at Tam-Öghil, a similar site to be mentioned thereafter, from the gold that is washed from the beds of the Khotan rivers. It seems to me a very probable explanation that a portion at least of the Yōtkan gold represents remains of leaf-gold used for gilding purposes. From the detailed description which the Chinese pilgrim Fā-hien gives of the splendid Buddhist temples and monasteries he saw on his visit to Khotan (circ. 400 A.D.), it is certain that not only images but many parts of sacred buildings were richly overlaid with leaf-gold.[1] Much of this must have fallen off and mingled with the dust when these structures crumbled away, not to be recovered until the soil could be washed by the method now followed.

Identification of Buddhist sites.

It is impossible here to detail the evidence, both historical and topographical, which supports the belief that we have in the débris strata brought to light beneath the fields of Yōtkan, the remains of at least a part of the ancient capital of Khotan. To me the most convincing proof lies in the ease with which I was able to identify, from this starting point, the positions assigned by Hiuen-Tsiang's narrative to the most prominent Buddhist shrines he visited in the vicinity of the capital. They were invariably found to be occupied now by Muhammadan Ziārats, forming the objects of popular pilgrimage. Thus the tenacity of local worship proved as valuable a help for the study of ancient topography in Khotan as it had proved to me before in Kashmir and other parts of India. Among the identifications thus effected it may suffice to mention here the small hamlet of *Somiya*, a little over a mile to the west of the Yōtkan excavations, which corresponds exactly in direction and distance to the convent described by Hiuen-Tsiang under the name of *Sa-mo-joh*.[2] The modern name can be shown by parallel instances to be the direct phonetic derivative of the old local name intended by the Chinese transcription. A low mound near the Ziārat of the place, regarded with superstitious awe and still an object of local worship,

[1] See *The Travels of Fâ-hien*, trans. by Legge, pp. 19, *sq.*

[2] See *Si-yu-ki*, ii., pp. 316 *sq.* The Sa-mo-joh convent is probably identical with the great Buddhist shrine mentioned by Fa-hien, under the designation of "The King's new monastery."

probably marks the site of the Stūpa, the miraculous story of which is related at length by the Chinese pilgrim.

March to Dandān-Uiliq.

The survey of ancient localities within the oasis, to which only brief reference can be made on the present occasion, kept me busy until the first days of December. After hurriedly completing at Khotan the preparations for our winter campaign, I started on the 7th December on the way to Dandān-Uiliq, the site I had decided upon for my first explorations in the desert. Further inquiries had shown that Dandān-Uiliq was identical with the ruined site which Dr. Sven Hedin had seen on his march to the Keriya Daryā, and which is spoken of in the narrative of his travels as "the ancient city Taklamakan." This intelligence enabled me to indicate a definite place of *rendezvous* for Ram Singh, the Sub-surveyor, whom, on the 23rd November, I had sent out independently for a survey of the high range between "Kuenluen Peak No. 5" and the mountains eastwards, where connection could be obtained with Captain Deasy's work about Polu. A three days' march along the barren banks of the Yurung-kāsh, north of Khotan, brought me to Tawakkēl, a small oasis formed some 60 years ago on the outskirts of the forest belt, which accompanies the Khotan River on its whole course through the desert. Thanks to the stringent instructions issued by Pan-Darin, the Amban of Khotan, I was able to obtain here a party of 30 labourers for my intended excavations, together with four weeks' food supply. Owing to the reluctance of the village cultivators to venture far into the desert it would otherwise have been difficult to obtain sufficient labour, especially in view of the expected rigours of the winter. Two Tawakkēl hunters, who had already accompanied Dr. Sven Hedin, were, however, willing to be taken along as guides, and rendered good service in looking after the labourers. Our ponies, for which the desert to be crossed offered neither sufficient water nor fodder, were sent back to Khotan, while we set out on foot, the heavily laden camels carrying the food supplies, together with the indispensable baggage. Though the sand-dunes amidst which we passed, as soon as we had left the river bank, nowhere rose much above 15 feet, marching in the drift sand was slow work. Thus it was only after five days that we reached the area where the trunks of dead poplars and other garden

trees indicated ancient cultivation. The course taken by our Tawakkēl guides had carried us somewhat too far north, but Turdi, the experienced old 'treasure-seeker,' soon found his bearings in the sandy waste. On the following day, the 18th December, I was able to pitch camp in the middle of the scattered ruins, which, among the treasure-seeking fraternity of Khotan, go by the name of *Dandān-Uiliq* ("the houses with ivory").

A preliminary inspection showed that the ruins consist of isolated little groups of houses of a modest size, spread principally over an area about 1½ miles from north to south and three-quarters of a mile broad. The walls, constructed throughout of a wooden framework covered with plaster, were either still visible broken down within a few feet from the ground or, where covered by low dunes, could be made out by the rows of wooden posts sticking out above the sand. The houses left exposed all showed signs of having been "explored" by treasure-seekers, and bore plain marks of the damage done by their operations. Turdi readily recognised the places where he and his companions had been at work during previous visits. Luckily, owing to the difficulty experienced in carrying sufficient supplies, they had never been able to make a prolonged stay. Hence the structures covered with more than a few feet of sand had escaped unopened.

Excavations at Dandān-Uiliq.

Several of the exposed structures showed clearly, by the remains of frescoes representing Buddhas or Bodhisattvas, that they had served as Buddhist places of worship. Guided by the indications thus gained, I commenced excavations at a group of small buildings which were covered below 6–8 feet of sand. These proved to consist of two temple cellas, once richly decorated with wall paintings and stucco images. As their construction is typical of that observed in other shrines subsequently excavated at Dandān-Uiliq, a brief description may be given here. The larger cella forms a square of 10 feet inside, with a door opening from the north. The hard plaster of the wall is laid on a framework of wood covered with layers of reed, the whole having a thickness of 6½ inches. The cella is enclosed by a quadrangular passage about 4 feet 6 inches wide, with outer walls of the same construction. It, too, had an entrance in the centre of the north wall. The interior of the cella was once occupied by a colossal stucco statue, which must have

5.

RUINED TEMPLE CELLA, D.II., DANDAN-UILIQ, AFTER EXCAVATION.

6.

RUINED BUILDING. N.I., NIYA RIVER SITE AFTER EXCAVATION.

represented a Buddha. But of this only the feet remain, about 13 inches long, raised on an oblong base about 3 feet high. The other parts of the statue, once supported inside by a wooden framework, have crumbled away into fragments which broke at the slightest touch. Each of the four corners of the cella was occupied by a draped stucco figure standing on a lotus-shaped pedestal. But only one of these figures was found intact up to the navel. The walls of the cella were decorated inside with frescoes showing figures of Buddha or saints enveloped in large halos. As these, too, were over life-size, only the feet with the broad painted frieze below them showing lotuses and small figures of worshippers could be seen on the walls still standing. On the outside the cella walls were adorned with fresco bands containing small representations of seated Buddhist saints, in the attitude of meditation, only the colours of the robes and halos varying.

The inside of the walls which enclose the passage seems to have been decorated in a fashion similar to that of the inner cella walls. Plate IV. gives a reproduction on a reduced scale of a piece of painted plaster which I succeeded in removing safely from the south wall of the passage. It shows the figure of a seated Buddha or Bodhisattva, occupying the triangular space left between the lower portions of two larger frescoes. The inscription painted beneath in black colour is in Central-Asian Brāhmī characters. The language of this and some other short inscriptions found beneath frescoes at Dandān-Uiliq is not Indian, but perhaps the same as the non-Sanskritic Brāhmī documents of this site exhibit.

The Buddhist shrine just described is adjoined on the west by another small cella, 12 feet 8 inches long and 8 feet 8 inches broad, and constructed in the same fashion. Photograph No. 5 shows its south-east corner. The high stucco base seen on the south (right) side represents a *siṁhāsana*, and must have borne a statue, of which only fragments could be traced. The headless figure seen to the left on the photograph seems to represent an attendant standing over a vanquished foe, perhaps meant for a demon. The figure wears a kind of mail-armour, the bright colours of which are preserved very well. In the corners near the large base numerous small stucco relievos were found representing teaching Buddhas. All these relievos appear to have formed part of a great halo, and their original arrangement can

be partially restored from the larger fragment (D. ii. 34) reproduced in its present colours on Plate III. The other small stucco relievo (D. ii. 011) representing a seated Buddha, shown on the same plate, also belonged in all probability to a decorative halo. Judging from the many dozens of similar stucco fragments which my excavations yielded, this style of wall-decoration must have been very common in the shrines of Dandān-Uiliq.

Frescoes and painted tablets.

The walls of the small cella just described appear to have been adorned with frescoes showing considerable delicacy and boldness of outline. Unfortunately they have suffered much through the decay of the plaster walls, and an attempt to remove them would only have led to destruction. In style of composition and the drawing of figures the resemblance to the later of the Ajanta frescoes is unmistakeable. Considering how little of old Indian painting has been preserved, the study of these Dandān-Uiliq frescoes is sure to prove of interest. For the same reason the small painted tablets which I discovered on excavating the cellas just mentioned and others of a similar description possess special value. These tablets, of which a specimen (D. vii. 5) is reproduced on a reduced scale in Plate II., were undoubtedly votive offerings from worshippers who had visited the shrines before the site was abandoned. They represent either sacred personages of Buddhist mythology or little scenes which may have some bearing on local Buddhist traditions. The subject of the tablet reproduced, which also recurs in a fresco of the Cella D. ii., seems to belong to the latter category. It is curious to note in this connection that one of the tablets, to which my attention was called by my friend Mr. F. H. Andrews, shows a sacred figure with the head of a rat. Have we here a personified representation of the holy rats which, according to the story of Hiuen-Tsiang already quoted, received local worship from the Buddhist inhabitants of Khotan? The painted tablets, of which altogether over twenty were unearthed by me in the Dandān-Uiliq temples, were invariably found placed in front or on the bases of statues. Owing to this position, near the ground, the thin layer of water-colour with which they are painted has unfortunately often suffered damage. The removal of the crust of sand and siliceous matter which adheres to the surface is, for the same reason, a difficult task requiring patience and time.

Manuscripts excavated.

Apart from the mural inscription referred to and a thin and nearly decayed strip of paper on which only a few Brāhmī characters are legible, no writing was found in the cellas of D. ii. But the next structure I excavated, about 20 yards to the north-west, yielded the first of the manuscript finds which were to reward our labours at Dandān-Uiliq. In the deep, loose sand which filled what seems to have been the lowest storey of a dwelling-house for the monks attending the neighbouring temples, oblong leaves of paper covered with old Brāhmī characters of the North-Indian (Gupta) type came to light, either detached and often reduced to mere fragments or in little packets preserving the arrangement of Indian *pōṭhīs*. They proved to belong to at least four distinct manuscripts, three of which are in Sanskrit, apparently treating of Buddhist canonical matter. A fifth, beautifully written in Brāhmī characters of the peculiar so-called Central-Asian variety, shows a non-Sanskritic language yet awaiting identification. A leaf of the larger Sanskrit manuscript (D. iii., 13), of which altogether 15 folia were ultimately recovered, is reproduced on Plate V.

Neither during the explorations nor since have I found time for a close study of the palæographic peculiarities or the contents of this and other manuscripts discovered at Dandān-Uiliq. I must therefore leave it to others to form an exact estimate of their age. I may, however, point out that in none of the Sanskrit leaves did I come across any other than the old tridentate form of the Akshara *ya*. If this test can be relied upon, in accordance with the results derived from Dr. Hoernle's close investigation into the palæographic features of the ancient manuscripts previously discovered in Turkestan, it would be difficult to assign to them a date later than the seventh century A.D. But so far as other observed criteria go, the manuscripts to which the leaves excavated in this house belong may well have been written as early as the fifth or sixth century. The folia, whether loose or in small packets, were found embedded in varying depths of sand, their position well above the floor suggesting that they had fallen in from an upper storey, while the basement was gradually filling up with drift sand. The pagination numeral 132 found on one of the Sanskrit leaves shows that the folia rescued from the basement are mere fragments of larger texts which probably perished with the destruction of the upper floor. The room below contained a big fireplace with an elaborately moulded

chimney, built in hard plaster against the west wall, and by its side a broad wooden bench filling a kind of recess. A rough wooden tripod stand, such as is still used in Turkestan houses to support large waterpots, remains of animal bones, oil-cakes, torn pieces of felt and similar refuse make it probable that the place had been used as a cookroom. As it lay partly buried beneath a sand dune rising some 16 feet above the original ground level, the excavation was a difficult task and occupied us fully three days, though here as afterwards the men were kept at work under my immediate supervision from morning till evening.

Construction and preservation of Dandān-Uiliq ruins.

This brief description of the structures first excavated at Dandān-Uiliq must for the present suffice as an indication of the general character and contents of the ruins at this site. The total number of detached temples and dwelling-places which were thoroughly excavated and examined amounts to fourteen. They all resembled each other closely with regard to materials and mode of construction, but their state of preservation greatly differed. Those from which the sand-dunes had receded, and which had thus become exposed at one time or other to the erosive action of the winds of the desert, have suffered badly. Where the layer of sand was thin much damage had also been done by the diggings of 'treasure-seekers.' Near most of the buildings there were to be seen, half buried in the sand, groups of shrivelled and bleached trunks of poplars and fruit trees, marking ancient orchards and avenues. On some patches of ground left uncovered between the moving dunes, the traces of old irrigation channels, running between small banks of earth, were easily recognisable, though it was impossible to follow them for any distance. In many places between the scattered ruins the ground was thickly strewn with fragments of coarse pottery, small corroded pieces of metal, and similar débris. These remains, found in places where at present no traces of old structures survive, probably mark the positions occupied by less pretentious dwellings, which, like the houses of common Khotan cultivators at the present day, were built entirely of sun-dried bricks or stamped clay, and have therefore crumbled away far more quickly than buildings with a timber framework. The latter mode of construction also is still used in the towns and villages of Khotan, but being far more expensive, owing to the distance from which wood has to be brought, is restricted to the houses of the well-to-do

and to mosques, Sarais, and similar buildings. This observation, I believe, helps to explain, at least partly, why at sites which, like Dandān-Uiliq, must for various reasons be supposed to have been occupied by comparatively large settlements, the extant structural remains are limited in number and so widely scattered.

Finds of documents in Chinese, &c.

Among the finds which attended the excavation of other buildings at Dandān-Uiliq, there are some which, even in this preliminary account, demand special mention, however brief. In several of the excavated shrines and attached dwelling-places, there were found single leaves of thin coarse paper, inscribed with a peculiarly cursive type of Central-Asian Brāhmī, and showing a manifestly non-Indian language. In the character of the writing and in general appearance they bear a very close resemblance to some manuscript sheets which were sent to Calcutta through Captain Godfrey, and have since been published by Dr. Hoernle.[1] There appears good reason for assuming that, notwithstanding the different account originally recorded of them, these sheets are in reality some of the earlier finds which my own guide, Turdi, had brought away from Dandān-Uiliq on one of his expeditions. The manuscript pieces of this class were mostly found folded into small rolls, or else crumpled up. A clue to their contents may possibly be derived from Chinese documents of similar material and appearance which turned up in the same localities.

One of the Chinese documents which was found in D. vii., a small monastic dwelling adjoining a ruined shrine, and which was originally folded up into a roll, is reproduced (on a reduced scale) in Plate VI. According to a provisional translation which Mr. Macartney was kind enough to make for me, this document seems to be an order issued by the monks in charge of a Buddhist Vihāra to the monk or caretaker on an outlying piece of land belonging to their monastery, concerning the cutting of grass and other field labours. No date appears on this document, but two other papers containing records of loans and mortgages, which I found in the same dwelling, and which also Mr. Macartney was good enough to examine for me, are dated in the 3rd and 8th year, respectively, of the Chinese Emperor *Chien-Chung* (780–805 A.D.). Another paper containing a petition for the recovery of a

[1] *See* Three Further Collections of ancient Manuscripts from Central Asia, *Journal of the Asiatic Society of Bengal*, 1897, p. 17, and plates V.–VII.

donkey, found in a different monastery, was written in the 16th year of *Ta-li* (763–780 A.D.).

Date of Dandān-Uiliq ruins.

There are reasons for assuming that these petty records do not precede by any great length of time the date when the dwellings were abandoned. We thus obtain the end of the 8th century as the approximate chronological limit for the existence of Dandān-Uiliq as an inhabited locality. It is, of course, possible that particular buildings were deserted earlier than others. But it is noteworthy that the evidence of the numerous coins found during my stay at Dandān-Uiliq entirely supports this dating. Apart from early copper pieces without legends issued under the Chinese Han dynasty, all the coins belong to the T'ang dynasty, the latest bearing the symbols of the K'ai-yuen period (713–741 A.D.).

In the light of subsequent discoveries we may recognise quasi-archaic relics in two small tablets of wood bearing inscriptions in cursive Central-Asian Brāhmī characters and a non-Indian language, which were found along with paper documents in the same script and some Chinese papers. At the time of their discovery I little suspected how much more of the same ancient writing material was awaiting me elsewhere.

On the 3rd January the explorations at Dandān-Uiliq were completed. Ever since our start from Khotan the severe winter of the desert had set in. During our stay at Dandān-Uiliq the temperature at night usually went down to a minimum of about — 10° Fahr., while in day time, owing to the prevalence of cloudy weather, it never rose above freezing point in the shade. The dead trees of ancient orchards luckily supplied fuel in plenty. But the men suffered from the exposure as well as from the badness of the water, the only available supply coming from a brackish well which they had succeeded in digging in a depression of the ground over a mile from the main ruins. Before, however, leaving this desolate neighbourhood I marched across the gradually rising sand-dunes to the north, where Turdi had reported another old site, known to 'treasure-seekers' as *Rawak* ("high mansion"). At a distance of some seven miles I found close together two much decayed mounds of fairly hard sun-dried bricks, probably the remains of small Stūpas. They had evidently been dug into repeatedly. Old Han coins turned up among the pottery débris which covered the low ground between the sand-dunes. As the latter rise here to heights over 25 feet and are proportionately large, it was scarcely surprising that we could trace the ruins of only one

house built with timber. Its walls had decayed by erosion to within a few feet of the ground; we found within them a well-preserved wooden tablet inscribed with cursive Brāhmī characters, in the non-Indian language already noted.

Various indications make it appear probable that the settlement traced at Rawak was deserted a considerable time before Dandān-Uiliq. But until the peculiar physical conditions of the various parts of the Taklamakān, and particularly those concerning the movement of the sand-dunes, have been systematically studied for a prolonged period, it would be hazardous to draw conclusions as to the rate of progress in the general advance of the desert southwards. Touching upon another point of geographical interest, I may note that our survey has furnished no evidence supporting the assumption that the Keriya Daryā in historical times flowed much further to the west, and that the abandonment of Dandān-Uiliq was connected with the shifting of the river to its present bed. On topographical grounds, which cannot be set forth here in detail, it seems more probable that the lands of Dandān-Uiliq were irrigated from an extension of the canals which, as I ascertained subsequently, had down to an even later date brought the water of the hill streams of Chīra and Gulakhma to the desert area due south of the ruined site.

March to Keriya.

From Rawak I dismissed, on the 6th January, my labourers, who were to return westwards to Tawakkēl. I myself, with the reduced caravan, struck to the south-east, and after three days' marching over most forbidding ground reached the Keriya River. The dunes between Dandān-Uiliq and the river grow to formidable proportions, several of the successive great ridges or Dawāns of sand, which had to be crossed, rising to a height of about 200 feet. I had decided first to visit Keriya, the headquarters of the district to the east of Khotan, before commencing other explorations, in order to secure personally the assistance of the local Amban as the indispensable condition for successful work. A march of four days along the hard frozen river through the belt of *Toghrak* (poplar) jungle and scrub which accompanies its course, brought us to the oasis and town of Keriya. Khon-Daloi, the Amban, had been duly advised of my visit and its object by Pan-Darin, my Khotan friend, and showed genuine eagerness to facilitate my explorations in every possible manner.

In the course of my inquiries at Keriya I heard of a *kōne shahr* ("old town") in the desert, north of the well-known pilgrimage place of

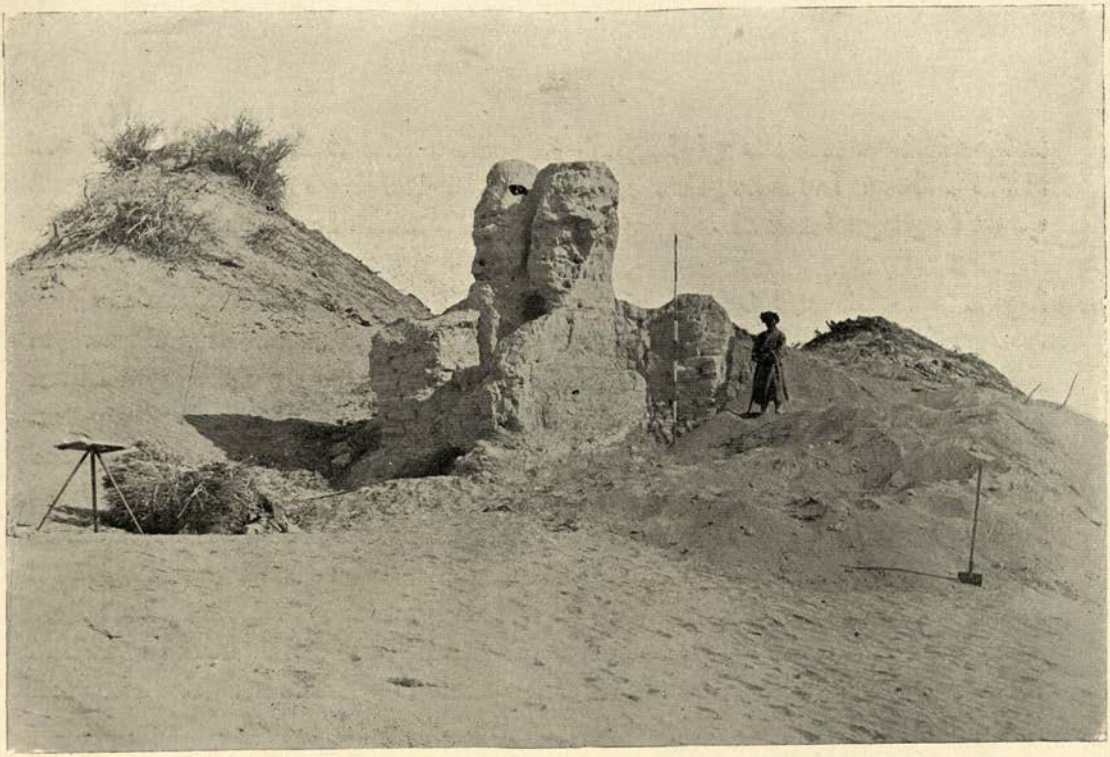
Imām Jafar Sādik. The information was scanty indeed, but the existence of the Muhammadan shrine seemed, in the light of former experience, to point to some earlier site of interest being found in that vicinity. So I did not hesitate to set out for it as soon as my ponies had arrived from Khotan. On the 21st January we reached Niya, the easternmost of the smaller oases which were included in the Khotan district until the constitution in recent times of Keriya as a separate administrative unit. Hiuen-Tsiang travelling towards Lopnor and China, duly notices the town of *Ni-jang*, *i.e.*, Niya, which "the King of Kustana (Khotan) makes the guard of his eastern frontier."[1]

Find at Niya.

A single day's halt, necessitated by arrangements for supplies and labour, furnished me with unexpected proof of the antiquity of the ruined site for which I was bound. One of my followers accidentally obtained from a villager two small wooden tablets bearing Kharoshṭhī writing, of the type which is peculiar to the period of Kushana rule in the extreme north-west of India, and which can thus be assigned chronologically to the first and second centuries of our era. They had been picked up from curiosity, but subsequently thrown away as valueless, by an enterprising young fellow, who alone among the Niya villagers during recent years had visited the "old town" north of Imām Jafar Sādik. I succeeded in securing Ibrahīm, the original finder, as guide, and accompanied by a sufficient number of labourers, duly equipped for prolonged excavations, marched for about 60 miles through the belt of thick forest which lines the winding course of the Niya River amid the desert. On the 26th January we left behind the curious desert shrine of Imām Jafar, after having taken along, as additional labourers, a dozen or so of able-bodied men, all that could be secured from the secluded little settlement of shepherds and mendicants living at the shrine. The little water-courses into which the river splits up before it is finally absorbed in the sand, do not reach beyond Imām Jafar, and as water cannot be got by digging, it had to be carried from the latter place. Fortunately the intense cold still prevailing (on the 26th January I registered a minimum of 44° Fahrenheit below freezing point) permitted its convenient transport in the form of ice. The ponies were left behind at Imām Jafar and only the camels taken onwards.

[1] See *Si-yu-ki*, ii., p. 324.

7.



RUINED STŪPA NIYA RIVER SITE.

8.

EXCAVATION IN ANCIENT REFUSE-HEAP OF RUINED DWELLING, N.XV., NIYA RIVER SITE.

Ruins of Niya River Site.

A two days' march, covering about 30 miles northwards, brought us on the 27th January to the southern edge of the area containing the ruins I was in search of. The explorations of the next three weeks showed that the area covered by this ancient settlement which, in the absence of any specific local designation, I propose provisionally to call the Niya River Site, so far as it is still traceable in the scattered groups of ruined buildings, extended for over 11 miles from north to south, with a maximum breadth of about 4½ miles. The first camp was pitched near a ruined brick structure in which it was easy to recognise a small Stūpa half buried in the sand (*see* Photograph No. 7). On the following morning I proceeded to the ruined house, some 2 miles to the east, where Ibrahīm had a year previously picked up the two wooden tablets with Kharoshṭhī writing already referred to while "prospecting" for treasure. He declared that he had left more tablets *in situ*. To my delight, on reaching the ruined structure marked by timber débris, I found at once some tablets actually exposed, and many more scattered about under a slight layer of drift-sand within a few yards of the spot where Ibrahīm had originally unearthed them. This proved to be the south-west corner, originally holding a kind of shelf or cupboard, of a small room measuring 16 by 14 feet, which was situated between other apartments in the northern wing of the building. In Photograph No. 6, which shows the ruin after excavation, this room is seen on the left, near where the two wings meet at right angles.

This photograph will help to convey an idea of the manner in which this and other buildings subsequently examined at this site were constructed. On massive beams forming a kind of foundation, heavy wooden posts are set, which, joined by cross-beams and a light intermediary framework, supported the walls and the roof. To this framework was fixed a strong kind of matting made of rushes, which again was covered on each side with layers of hard plaster of varying thickness. These walls had completely decayed where not actually covered by sand, but the posts originally holding them, now blanched and splintered, still rise high above the surface.

Inscribed tablets first excavated.

In the building first explored the sand which during former centuries must have protected the ruin had largely drifted away, and lay nowhere deeper than three or four feet above the original flooring. It was hence all the more surprising to observe the remarkable state of preservation in which many of the

inscribed tablets were found. Over a hundred were cleared from the little room already described, most of them being wedge-shaped, from 7 to 15 inches long, and showing evidence of having been arranged in pairs. Some practically intact specimens of this class which still retained their string and clay sealing, illustrate the ingenious manner adopted for the fastening of these documents. The number of inscribed tablets of oblong shape which also turned up here greatly increased when on the following day I had the southern wing of the building carefully cleared. Within a larger room about 26 feet square, which had a raised platform of plaster running round three of its sides, we found the ground covered in places with inscribed tablets of all sizes. Most were oblong, some by their considerable length (up to 30 inches) resembling palm leaf manuscripts. The wedge-shaped tablets and those oblong ones which by their raised side margins, as detailed below, are proved to have been once fitted with covering tablets, *i.e.*, a kind of envelope, invariably have their lines of Kharoshṭhī writing on the inside running parallel to the longer side. Some of the larger tablets of oblong shape found here (N. iv.) and in another building (N. v.) exhibit narrow vertical columns of writing resembling the arrangement used for a metrical text in the birch-bark leaves of the Dutreuil de Rhins manuscript. Others again appear to be covered with detached formulas or memoranda written sometimes in different hands. On many of these tablets from N. iv. I also observed traces of dots of red paint resembling the auspicious Sindūra marks of Hindu worship, such as the manuscript fragments and other votive offerings found in the shrines of Dandān-Uiliq often exhibit. These and some other indications make me inclined to assume that the ruin first excavated was probably a monastic building, in which the larger apartment N. iv. may have been used as a place of worship. Unfortunately the protecting layer of sand was here only about two feet deep, and in consequence all materials not lying quite flat on the floor have decayed completely. In the middle of the south side, where an accumulation of tablets on the raised platform seemed to indicate the presence of some special object of worship, the wall has perished to within a few inches from the floor.

Erosion of ruins.

The photograph reproduced of this ruin, as seen from a sand-hill close by, will help to realise the extent to which this and other structures of the site have suffered by erosion. The small plateau which the building occupies, raised some 12 to 15 feet above the immediately surrounding ground, is unmistakably due to

the erosion which has proceeded around the ruin. While the strip of ground actually covered by the débris of the structure retains the original level, the open surface near by, consisting of mere loess, has been lowered more and more by the action of wind. The drift sand carried along over this portion of the area is not sufficient at present to fill the depression thus created. The heavy timber débris seen on the northern slope of the plateau marks a part of the original building, which has completely fallen owing to the soil beneath having been eroded.

The danger to ruins implied by this process received striking illustration by the condition in which I found a large group of dwellings about a mile to the north-west of the building first excavated. An area roughly measuring 500 feet square is closely occupied by the timber débris of ancient houses. But as the dunes here are only a few feet high, and the ground everywhere greatly eroded, very little now remains of the walls and still less of the contents of the rooms which they once enclosed. Even thus we came upon interesting finds of inscribed tablets in a detached room (N. v.), near the centre of the ruined area. The sand covering its floor lay only half a foot to one foot deep. Being thus poorly protected against atmospheric influences, the majority of the 50 odd tablets we here picked up had become withered and bleached until all trace of writing was lost. Others, though much warped and very brittle, still show Kharoshṭhī writing. Oblong tablets of considerable length were particularly frequent among these finds, one piece (unfortunately entirely bleached) attaining the respectable dimensions of 7 feet 6 inches in length with a width of 4½ inches.

Ancient furniture, etc., from ruined dwelling houses.

Far deeper in the sand and consequently better preserved were the remains of two large dwelling-houses which were next explored, about 3½ miles due south of the Stūpa. One of these (N. iii.), which, judging from the size and number of the apartments, must have been the residence of a man of position and wealth, furnished a very interesting series of objects illustrating the industrial arts of the period. Among the articles of ornamental woodcarving found there the chair reproduced on Plate XIII. is, perhaps, the most instructive. Its pieces, though disjointed, lay close together under the sand, and could easily be fitted together. They show decorative motives familiar to us from the relievo

sculpture of the Buddhist monasteries of Yusufzai and Swat, the ancient Gandhāra. The date thus indicated agrees with the evidence of the Kharoshṭhī writing on the wooden tablets, apparently memoranda and lists, which were found scattered in various rooms. One of these, from the broken pieces of arms and household implements, all of wood, found there, appears to have been a store-room. Another and larger room, which still retained the massive beams full 40 feet long once supporting its roof, was evidently a kind of reception hall. Its stuccoed walls showed on excavation a carefully executed fresco decoration with garlands of lotus flowers, &c. Near the fireplace occupying the centre we found pieces of a coloured rug, resembling in make an Indian "Durrie," which seems to have served as a floor covering. Plate XII. reproduces on a reduced scale one of the pieces of this interesting specimen of ancient textile industry.

Equally curious finds of household articles, together with tablets of varying shape, rewarded the clearing of another large dwelling-house (N. iv.), some 300 yards distant. Among them were the well-carved legs and arm-rests of a wooden chair, representing lions and human-headed monsters, and still retaining traces of colour. The broken end of a kind of guitar, closely resembling the popular *Rabāb* of modern Turkestan, with strings still intact, shows how little change there has been in some of the arts of the country during many centuries.

Ancient orchards.

The plan and arrangement of the orchards and gardens once surrounding these dwellings could be traced with ease. Rows of fallen poplars (*Terek*), up to 50 feet in length, half covered by the sand, marked the position of avenues such as are planted to this day everywhere along the canals and roads of Turkestan villages. The areas of ancient gardens could be made out by the rush-fences used then as now for their enclosure. Among the withered trunks, rising a few feet above the sand, my diggers had no difficulty in distinguishing various fruit trees, such as the peach, plum, apricot, *Zigda*, mulberry, &c., the wood of which they know from their own homes. The character and condition of the articles found within the houses plainly showed that they had been cleared by their last inhabitants, or soon after their departure, of everything possessing value. I had thus to base my hopes for archæological finds mainly on any rubbish remains which might have been left behind.

These hopes received unexpected confirmation on the discovery of a true refuse-heap in the structure I next selected for excavation. On a reconnaissance I had noticed a small and much decayed building, about 4 miles due north of the "Stūpa Camp." A superficial scraping of the ground in one of the rooms sufficed to disclose more than a dozen tablets, inscribed with Kharoshṭhī characters. After systematic excavation this room (N. xv.), proved to contain a consolidated mass of refuse, lying fully 4 feet above the original floor, as seen in Photograph No. 8. Scattered among the layers of broken pottery, straw, rags of felt and woven fabrics, pieces of leather, and other rubbish, there were found over 200 documents on wood, of all shapes and sizes. Besides tablets with Kharoshṭhī writing, which form the great majority, there came to light numerous narrow pieces of wood, bearing Chinese characters, like the two specimens reproduced on Plate VI.[1]

Discovery of ancient rubbish-heap.

But, in addition, this exceptionally rich rubbish-heap yielded another writing material, little suspected among a Buddhist population with an Indian civilization. About two dozen Kharoshṭhī documents on leather, mostly dated and apparently of official nature, prove that the Buddhists of this region had as little objection to the use of leather for writing purposes as the pious Brahmans of old Kashmir had to the leather bindings of their Sanskrit codices. Plate XI. shows one of these documents on leather, both in its original folded state and when opened after centuries of burial. The black ink with which these documents were written retains in most places a remarkable freshness. The discovery of an ancient pen, made of tamarisk wood (*see* Plate VII.), in the same rubbish-heap, helps us still better to realise the conditions of clerical work in that period. The bone knob of the pen may have been used as a burnisher.

Kharoshṭhī documents on leather.

Many of the Kharoshṭhī tablets unearthed from N. xv. are in very fair preservation, and have retained intact the original clay seals and strings with which they were fastened. It is thus possible to ascertain the technicalities connected with the use of wood as a writing material.

Arrangement of wooden tablets with Kharoshṭhī text.

[1] Owing to an error of reproduction, these small pieces have been shown upside down in the Plate.

The wedge-shaped tablets, which seem to have been largely used for short communications, are well illustrated by the specimen reproduced full-size on Plate VII. They seem always, as in this case, to have consisted of pairs of wooden pieces fitted exactly to match each other in size. One end of the double tablet thus formed is invariably cut off square; the other runs out into a point near which a string-hole is drilled through both pieces. The text of the document occupies the smooth obverse of the under tablet, and was protected by the upper or covering tablet which rests on it. Where the length of the document rendered it necessary, the writing was continued on the reverse of the covering tablet. The writing, on whichever side of the tablets, invariably runs parallel to their length and begins from the square-cut end, which, as Kharoshṭhī is written from right to left, always falls to the right of the reader. The wood of the obverse of the covering tablet shows greater thickness towards the right end, and in this raised portion a square socket is neatly cut, intended for the reception of the clay seal. A string was passed in a cleverly devised fashion through the string-hole and drawn tightly over both tablets near the right end. There it was held in its place by grooves communicating with the seal-socket, as seen in the reproduction of the wedge-shaped tablet on Plate IX.

Fastening of wedge-shaped tablets.

The clay seal pressed into the socket covered the end of the string and the several folds laid through the grooves. Thus the covering and under-tablets could not be separated without either breaking the seal or cutting the string. If the latter was cut near the string-hole, as in the case of the double tablet N. xv. 137, reproduced on Plate VII., the under-tablet could be slid out from the folds of string running underneath the seal and be read. As long as the folds under the seal were not cut, it was possible to use them again for the purpose of a temporary fastening of the two pieces, an obvious advantage where documents of this kind had to be kept for record. In some cases extra care, apparently, had been taken to attest the connection between the two parts of a double tablet by means of a second detached seal fastened on a string which was passed through the string-hole. This arrangement is seen in the case of the tablet N. xv. 71, reproduced on Plate IX. There the round seal in hard red clay, near the left end, still unites the covering and the under-tablet. But as the main seal on the right side has been

broken and the string untied, the two pieces can now be slid apart like the ribs of a fan and be read with convenience. The arrangements here briefly described made it possible to secure the communication written on the inner sides of the two tablets against unauthorised inspection. If the few words usually found to the right of the main seal on the obverse of the covering tablet should prove to contain the name or other description of the addressee, the covering tablet could indeed be considered to have served all purposes of a modern envelope. On the other hand, it is curious to find on the reverse of the under-tablet, usually left blank, entries by a different hand, such as can be seen in a fainter ink on the back of the under-tablet N. xv. 137 (Plate VII.). Do they represent, perhaps, a record as to the disposal of the original document, a kind of "docket" note by the official who received it?

"Envelopes" for oblong tablets; their fastening.

Scarcely less ingenious is the method of fastening which the finds of N. xv. prove to have been in use for the oblong tablets. From a number of double tablets of that shape which turned up here practically intact, it is seen that the under-tablet was in this case provided with a raised rim on either side. Between these fitted exactly a covering tablet, the obverse of which, in its raised centre, had a square or oblong socket for the reception of a clay seal. A string passed transversely over both tablets and secured below the seal, effectually prevented any unauthorised opening and reading of the document written on the inner sides of the two tablets. Plate X. shows the double tablet N. xv. 166, which was found with the string broken but otherwise intact, both before and after its opening. N. xv. 196, reproduced on Plate IX., is a small double tablet which still retains its original fastening and has not yet been opened. N. xv. 330 and N. xv. 167 *ibidem*, are "envelopes" of oblong double tablets, the corresponding under-tablets of which have not been found or identified. Plate VIII. shows the obverses of under-tablets found in other ruins without the "envelopes" with which, no doubt, they were originally fitted. It ought to be noted that the wood used for all inscribed tablets of "wedge" or oblong shape is invariably that of the *Terek*, the kind of poplar commonly planted by Turkestan cultivators. Comparatively few Kharoshṭhī documents were found written

on small pieces of tamarisk wood. These had the appearance of mere labels and showed far less careful workmanship.

Reading of Kharoshṭhī documents.

The total number of Kharoshṭhī documents on wood found in the various ruined structures of the Niya River Site amounts to more than five hundred, and together with the documents on leather already mentioned, provides ample materials for the study of both the script and the contents. But owing to the cursive character of the writing, and the peculiar difficulties connected with the language and the probable nature of the records, their thorough decipherment will require much time and patient labour. The many exacting tasks which claimed my attention during the short time available since my arrival in Europe, have left me no leisure to supplement the necessarily cursory examination I was able to make at the time of discovery, and in the rare moments of rest on my subsequent travels. The decipherment of the formula frequently recurring at the commencement of many wedge-shaped tablets and documents on leather (**mahanuuva maharaya lihati*, corresponding to Sanskrit, *mahānubhāvo mahārājo liphati*, " His Highness the Mahārāja writes," compare Plates VII. and XI.) and of the words *saṁvatsare . . . mase . . . divase* " in the . . . year, the . . . month, the . . . day " used with the Kharoshṭhī numerical figures for the indication of the date in many of the oblong tablets (comp. Plates VIII., X.), together with individual words like *putrasa*, *pramane*, *prathame*, &c., make it clear that the language is an early Prakrit, possessing probably a considerable admixture of Sanskrit terms. The introductory formula already referred to, the dating, and the care bestowed on the fastening and sealing, combined with other indications that cannot be set forth in detail, suggest that many of the double tablets contain correspondence, private or official. Others again may possibly prove to be records of agreements, bonds, and the like. Religious texts, votive records, &c., may be suspected in the long tablets resembling in shape the palm leaf manuscripts of India, found in what seem to have been shrines or monasteries. The mass of miscellaneous " papers " (to use an anachronism) which have turned up from the rubbish of various buildings, and in which the Kharoshṭhī numerical signs are of frequent occurrence, may contain memoranda, accounts, and similar records of a business character.

Historical importance of Kharoshṭhī documents.

It is easy to surmise the great historical interest attaching to this wealth of documents, and to realise the importance which must be claimed for their study. By the nature and variety of their contents they are certain to throw unexpected light on many aspects of life and culture in an early period of Central Asian history for which contemporary records were hitherto wholly wanting. The fact that many of the tablets bear exact dates in which the years are indicated with reference to the reigns of named rulers (compare tablets N. xvii. 2, Plate VIII., and N. xv. 166, Plate X.), must prove a very valuable feature from the point of view of historical chronology. The succession of those reigns may possibly be ascertained with the help of the accurate notes I have kept of the depth and order in which each tablet was found within the ancient rubbish-heap of N. xv. But while a prolonged study will be needed for the elucidation of these and other historical details, one important fact bearing on the origin and date of this culture can already be recognised. The use of an Indian language in the vast majority of the documents discovered, when considered together with the secular character of most of them, must be considered a striking confirmation of the old local tradition that the territory of Khotan was conquered and colonised at an early period by immigrants from the North-Western Punjab.

Tradition of immigration from the Punjab.

This tradition, which Hiuen-Tsiang heard at Khotan,[1] and which is related also in the old Tibetan texts about Khotan extracted in Mr. Rockhill's "Life of the Buddha," represents the immigrants as tribes from the neighbourhood of Takshaśila (the Taxila of the Greeks) who had been banished by the famous King Aśoka to the north of the snowy mountains. It must certainly lead us to believe in some historical fact underlying this tradition if in an outlying settlement of ancient Khotan territory we find documents of a secular nature written in a language closely resembling that which appears in Punjab inscriptions and coins of the centuries immediately succeeding the period of Aśoka. It is also certain that the Kharoshṭhī script was peculiar to the very region of which Taxila was the historical centre. Neither language nor script can satisfactorily be accounted for by the spread of

[1] See *Si-yi-ki*, ii., pp. 309, *sq.*

Buddhism alone, seeing that the latter, as far as our available evidence goes, brought to Central Asia only the use of Sanskrit as the ecclesiastical language and the writing in Brāhmī characters.

Probable date of Kharoshṭhī documents.

With regard to the question of date, the close agreement in palæographical features between the documents discovered at the Niya River Site and the Kharoshṭhī inscriptions of the Kushana or Indo-Scythian kings furnishes an important criterion. We know that these princes ruled over the Punjab and the Kabul region during the first two centuries of our era, and that the Kharoshṭhī script ceased soon after to be used in that territory which had formed its proper home. It is impossible to allow that the Kharoshṭhī writing was introduced into Khotan after the Kushana period, or that it could have remained there in current use for a long period without perceptible change. On the other hand, it must be remembered, in view of a well-established palæographical maxim, that documents written in ink are likely to exhibit certain cursive peculiarities far earlier than inscriptions engraved on stone or copper. From these considerations it appears safe to draw the conclusion that the documents now brought to light must belong approximately to the period covered by Kushana rule in the north-west of India. Fortunately an interesting find provides valuable collateral evidence. A narrow wooden board (N. xx. 1), which was excavated from a dwelling deeply buried in sand, about 3 miles to the north-west of N. xv., shows on one side a brief line in the usual Kharoshṭhī script. On the other side I discovered to my surprise three lines of Brāhmī characters, the only specimen of this writing from the Niya River Site. Though the ink on both sides has become very faint, and a complete reading will consequently be difficult, it is impossible to mistake in the legible portion of the Brāhmī text the characteristic features of the Brāhmī writing of the Kushana period. There is nothing in the appearance of the tablet or otherwise to justify the assumption that the two texts were written at different times. Hence the exact agreement of the palæographical indications furnished by the Brāhmī writing on the one side and the Kharoshṭhī on the other must be considered strong evidence in favour of the chronological conclusion already set forth.

The use of wood as writing material for all documents, with the exception of the small number of pieces on leather, is also a proof of considerable

antiquity. It is attested for India by very early texts, and previous to the introduction of paper must have prevailed largely in Central Asia, where neither palm-leaves nor birch-bark were readily available. Judging from the dates assigned to various fragmentary paper manuscripts from Kuchār which are contained in the collection under Dr. Hoernle's charge, the use of paper for writing purposes in Turkestan is attested from at least the fourth century A.D. onwards. Yet among all the ruined houses of the Niya River Site not the smallest scrap of paper was discovered.

Numismatic and other finds.

Numismatic evidence, too, helps to prove that this ancient settlement must have been finally abandoned in the early centuries of our era. The numerous coin finds extending over the whole ruined area which were made during my stay include only copper pieces of the Han period. Nor is there an object suggesting a later date among the seals, metal ornaments, and other small articles which were picked up in considerable numbers from the surface of the eroded ground. Plate XIII. shows a few of these objects, viz., two brass seals (C, G), a seal in stone (J), an ivory die (D), a small ornament of plated gold with set crystals (F), and a brass arrow-head inlaid with lacquer.

Classical seals on tablets.

I have already had occasion to refer to unmistakeable traces of the influence which classical art exercised even in distant Khotan. There is good reason to assume that this influence was exercised partly through Bactria, partly through Gandhāra and the adjoining regions on the north-west frontier of India. But even in these territories the materials for accurately fixing the period of this influence are as yet very scanty. On this account special interest attaches to the remarkable series of clay seals which were found still intact on a number of tablets. One frequently recurring seal, perhaps that of an official (seen, though not so distinctly as elsewhere, on N. xv. 166, Plate X.), represents a Pallas Athene with shield and ægis. Another (seen in the reproduction of the covering tablet N. xv. 330, Plate IX.) shows a well-modelled naked figure, in which I am inclined to recognise a seated Eros. On others again, like N. xv. 167 and N. xv. 71, *ib.*, there appear portrait heads showing individual treatment, though coarse workmanship, &c. Just as in the case of the original engraved stones of similar make found in the débris layers of Yōtkan, it is impossible to make sure which of these seals were actually engraved in Khotan

territory and which were imported from the West or other parts of Asia reached by Hellenic art. Yet the juxtaposition in N. xv. 167 of such a seal with one showing Chinese lapidary character, is strangely suggestive of that mixture of influences from the Far West and the Far East for which Khotan by its geographical position and political connections offered exceptional facilities.

It would require far more space than can be allowed in this Preliminary Report to refer to the many questions concerning the economic and cultural condition of this ancient settlement, for the study of which materials were brought to light in the course of my excavations. Nor is it possible here to give details as to ruins subsequently explored at this site. After three weeks of almost incessant work necessitating repeated shifts of camp, I succeeded in clearing every ruined structure that could be traced under the sand. Reconnaissances pushed for several miles across the high dunes of sand which encircle the ruined area from the north, failed to reveal any further traces of ancient remains. I was thus able on the 14th February to leave this fascinating site, which had yielded such ample antiquarian spoil, with a good conscience. The severe cold still prevailing had often made the work trying for the men as well as myself, but it had also facilitated the regular transport of ice, on which we had to depend. I had heard at Niya of old remains situated in the desert to the east towards Cherchen, and I decided to visit them. As the shortest route to the spot would take us through parts of the desert where water was not obtainable, it was important to proceed there before the approaching thaw would deprive us of the most convenient means of transporting it.

Ruins of Endere site.

A march of over a hundred miles almost due east from Imām Jafar Sādik brought us across the desert to the point where the Endere stream is lost in the sands. After a day's march further to the south-east we arrived safely at the ancient site which the guide I had secured with some difficulty knew only as the "*Kōne shahr* of Endere." There I found a ruined Stūpa surrounded by a *Tati* area of broken pottery and similar débris, and about 1½ miles to the south-east a group of buildings, in sun-dried bricks and timber, enclosed by a circular wall about 425 feet in diameter. This circumvallation, which originally consisted of a solid rampart of clay, about 17½ feet high surmounted by a brick-built parapet about 5½ feet high, has survived only

9.

TEMPLE CELLA AT ENDERE SITE, AFTER EXCAVATION.

10.

RUINED BUILDINGS AT ENDERE SITE.

11.

INTERIOR OF RUINED QUADRANGLE, KARADONG.

on a part of the south face and in some much-decayed segments elsewhere. But it helped to retain much drift sand inside the enclosed area, and to the protection thus afforded the preservation of the buildings is manifestly due.

The timely arrival of a fresh contingent of labourers from Niya, the nearest permanently inhabited place, enabled me to start excavations without delay. My first labours were directed towards a square structure, the wooden posts of which rose just above the sand in the centre of the area. It proved, as I expected from certain indications, to be a temple cella after the fashion of those cleared at Dandān-Uiliq. The shrine, which is seen in Photograph No. 9, forms a square of 30 feet, and is occupied in its centre by a large pedestal bearing originally four seated stucco images, presumably Buddhas. Life-size statues in the same material, all broken above the waist but retaining in part the vivid colouring of their robes, occupy the four corners. At the feet of these statues and around the hexagonal base of the central pedestal a considerable number of manuscript leaves on paper were found deposited, evidently as votive offerings. Among these finds were numerous fragments of a Sanskrit text dealing with matters of Buddhist worship and written in a very clear Brāhmī hand of about the fifth century. The manuscript, which had the shape of the usual Indian *pōṭhī*, seems to have been broken in the middle, either owing to folding or in the course of some previous digging by treasure-seekers. The pagination numbers read by me run up to 46, and probably about one-half of the original folia may yet be restored from the pieces now carefully placed under glass panes.

Manuscript finds at Endere.

A very curious and, as subsequent experience showed, remarkably well-preserved find was a small closely-packed roll of paper, about 4 inches high and half an inch thick, from which, under the patient and skilful treatment of Mr. Hunt, of the Manuscript Department of the British Museum, the four folia reproduced on Plate XV. have since been unfolded.[1] The writing, which covers both sides of the leaves, as in the case of all Sanskrit manuscripts, is Brāhmī of the well-known Central Asian variety. The text is in a non-Indian language, perhaps identical with that of various manuscript finds from Dandān-Uiliq.

[1] The Arabic numerals printed on the margin show the order in which the leaves followed one another in the roll. The last or innermost two were originally found with their writing reversed.

In addition, over half-a-dozen smaller pieces written in cursive Central Asian Brāhmī characters, also showing a non-Indian text, turned up among these votive deposits, besides a few scraps with Chinese characters and small drawings in colour.

Tibetan manuscripts.

Particular interest attaches to the paper leaves with Tibetan writing, of which altogether about two dozen, apart from some small fragments, were discovered in different parts of the cella. They are all written on a peculiar paper easily distinguished by its toughness and yellowish colour, and invariably on one side only. With the exception of three detached sheets showing very cursive characters, all Tibetan leaves and fragments seem to have originally formed part of one manuscript *pōṭhī*. The two leaves reproduced on Plate XVI. must have belonged to the left and right half of this manuscript, though not necessarily to the same folio. The manner in which the pieces of this manuscript were found deposited before the various statues and on the mouldings of the central pedestal, leaves no doubt that they had been distributed purposely. In order evidently to propitiate as many divinities as possible, the original owner seems to have first cut up the manuscript in the middle and then proceeded to deposit the halved leaves all round the cella. According to the information which Mr. Barnet, of the Oriental Manuscripts Department of the British Museum, was kind enough to give me on the basis of a preliminary examination, the text treated in this curious fashion deals with subjects of Buddhist metaphysics.

The visits of pious worshippers from Tibet are attested also by numerous *sgraffitti*, found together with some Chinese ones on the stuccoed walls of the cella. I found them also covering the wall of a hall excavated in the large brick building to the east of the temple. Other interesting relics are the small shreds of a variety of woven fabrics in silk and cotton, some showing elaborate patterns, which were picked up in numbers from the pedestals of the various statues. These also were undoubtedly votive offerings, such as can still be seen at all places of popular worship in Central Asia as well as in India.

The large building already referred to, of which a portion left exposed by the sand is seen in Photograph No. 10, occupies with its massive walls three sides of a quadrangle over a hundred feet square. The dimensions of its rooms suggest public use, but nothing was found in them definitely

to prove the true character of the structure. Nor did the clearing of several smaller houses built of timber and plaster, within the walled enclosure, help us to additional evidence regarding the date of these ruins. Judging from the character of the manuscript and sculptural remains excavated within the temple, as well as from the fact that only Han coins were found about the ruins, I am inclined to believe that the Endere site was deserted earlier than Dandān-Uiliq. The buildings still extant may have belonged to a fortified post intended to guard the route which in ancient times connected Niya with Cherchen, perhaps by a more northernly line than the one now followed.

March to Keriya and Karadong.

The discovery of proofs of Tibetan occupation showed me that I had reached at Endere the easternmost limits of the territory with the archæological exploration of which I was concerned. After a careful survey at the Stūpa, which had, of course, been dug into long ago, just like the one at the Niya River Site, I started on the 26th February back again towards the west. The journey to Keriya, a distance of more than 180 miles, almost wholly over desert ground, was covered in seven forced marches. Thanks to the energetic assistance of Khon-Daloi, who followed my movements throughout his district with the friendliest care and interest, a two days' halt sufficed for fresh arrangements about transport, supplies, and labourers. My next objective was the ruined site in the desert some 150 miles north of Keriya, to which Dr. Sven Hedin had paid a short visit on his memorable march down the Keriya Daryā. I knew from the accounts given by Turdi, who alone among the Khotan treasure-seekers had visited the place, that the remains of this so-called "ancient city" were very scanty. But I did not wish to leave them behind unexamined. By dint of hard marching we reached *Karadong*, as the ruins are called by the nomadic shepherds grazing along the Keriya Daryā, on the seventh day from Keriya. The spring season with its strong winds had set in, and our arrival was marked by a true sand-storm which returned with varying degrees of violence each day during my stay at Karadong.

Ruined post at Karadong.

The remains of Karadong consist mainly of a ruined quadrangle, which was formed by a mud rampart, about 235 feet square, with rows of timber-built rooms over it. Within this quadrangle, which is now crossed by two large dunes, rising about 20 feet above the original ground level, are the ruins of a much decayed

wooden structure, probably an ancient dwelling-house. Photograph No. 11 shows this ruin, together with the interior of the quadrangle as seen from the north-east corner. The excavation of this structure, and subsequently of a large gateway leading through the eastern rampart and still retaining a massive folding door, proved that the methods of construction used here were far rougher than at the old sites previously examined. Owing to erosion very little remained of the timber-built rooms on the top of the enclosing mud rampart. Potsherds, small broken pieces of glass and metal, rags of felt and similar rubbish, marked their former occupation. In the deep layer of earth which covered the roof of the gateway, and had served as the flooring of a room built above it, we came upon small quantities of remarkably well-preserved cereals. There were grains of wheat, rice, *Tarīgh* (a kind of pulse still common in this region), oats, and, besides some roots apparently used as condiments, large black currants dried perfectly hard.

The dozen coins found near the ruins are all copper pieces of the Han dynasty, showing long wear. Nothing else was discovered that would help to date the remains with any accuracy. There is no reason to suppose that an ancient route, leading along the Keriya River, once crossed the great desert towards Kuchār, in the north. Considering that the direct distance from Karadong to a now deserted bed of the Keriya Daryā is only about 10 miles, it seems probable that the fortified Saraī or post, represented by the Karadong ruins, was connected with this route. Though the dunes are less high to the east of the ruins, and patches of ground are found there clear of sand, only a comparatively small quantity of pottery could be traced. For this and other reasons I doubt whether Karadong could ever have been more than a small wayside station.

Site of Pi-mo identified.

On the 18th March I was able to leave this desolate locality, and to turn once more to places less distant from the present inhabited area. Various antiquarian and topographical considerations made me anxious to identify the position of the town of *Pi-mo*, which Hiuen-Tsiang describes as some 300 *li* to the east of the Khotan capital. It was probably the same place as the *Pein*, visited by Marco Polo.[1] After marching back along the Keriya River for four days, I struck to the south-west, and, after three more marches, arrived in the vicinity of Lachin-Ata Mazar, a desolate little shrine in the desert to the

[1] See *Si-yu-ki*, ii. pp., 322 *sq.*, with Beale's note, *ib.*, p. 324.

north of the Khotan-Keriya route. Though our search was rendered difficult by the insufficiency of guides and the want of water, I succeeded during the following few days in tracing the extensive ruined site which previous information had led me to look for in that vicinity. "Uzun-Tati" ("the distant Tati"), as the débris-covered area is locally designated, corresponds in its position and the character of its remains exactly to the description of Pi-mo. Owing to far-advanced erosion and the destruction dealt by treasure-seekers, the structural remains are very scanty indeed. But the débris, including bits of glass, pottery, china, small objects in brass and stone, &c., is plentiful enough, and in conjunction with the late Chinese coins found here, leaves no doubt as to the site having been occupied up to the middle ages.

Shifting of cultivated area.

The close inspection I was able to make in this vicinity of the conditions under which cultivation is carried on in modern days along the edge of the desert, proved very instructive from the antiquarian point of view. I ascertained that, owing to the difficulty of conducting the irrigation water sufficiently far, the cultivated area of some of the villages belonging to the Beg-ships of Domoko and Gulakhma had within the memory of living men been shifted as much as 6 to 8 miles further to the south. The crumbling ruins of the old village homesteads which had been abandoned, along with the fields once surrounding them, are still to be seen, stripped of all materials that could be of use. Over miles of ground which the desert sand is again slowly overrunning, the lines of empty canals, the little embankments dividing the fields, &c., can be made out with ease. Local tradition asserts that such shifts of the cultivated area, backwards and forwards, had occurred repeatedly in the case of the small oasis found along the edge of the desert on the route between Khotan and Keriya.

From Gulakhma, where, on the 29th March, I had caught sight again, for the first time, of the young green of cultivated fields and orchards, I sent the main part of my camp ahead to Khotan, while I myself hurried back to Keriya to bid farewell personally to the kindly Amban who had proved so helpful to me during the winter's work. The journey to Keriya and back to Khotan by forced marches occupied six days, the last of which was also utilised for a visit to the extensive débris area spreading on the outskirts of

the desert north of *Hanguya*. Ancient coins are frequently found there, and in the midst of the "Tati," which covers several square miles, I came upon the remains of a Stūpa.

Ancient remains of Ak-sipil.

Increasing heat by day and recurring dust storms warned me that the season was close at hand when work in the desert would become impossible. I accordingly hastened to set out for the ancient sites which still remained to be explored in the desert to the north-east of Khotan. On the 7th April I marched to the ruins known as Ak-sipil ("the white walls"), situated among high sand dunes, some 15 miles from the right bank of the Yurung-kāsh opposite Khotan. On the march and close to the edge of the cultivated area I examined the remains of the hamlet of Tam-Öghil, where ancient "culture strata," yielding some leaf-gold, besides coins, old pottery, &c., are worked under exactly the same conditions as at Yōtkan. The extent of the excavations is, however, far more limited, as the available water is scanty and the proceeds less remunerative. I noticed with interest that the banks of earth overlying the ancient strata to a height of 10 to 18 feet, silt deposits as I take it, showed here and there distinct traces of stratification. At Ak-sipil the most conspicuous remains are ruined portions of the rampart and parapet of an ancient fort. They have been noticed by several European travellers, but only the notes of M. Dutreuil de Rhins, as reproduced in M. Grenard's publication, contain reliable data regarding the place. The exact survey made by us showed that the extant ruins form a segment, about 360 feet long, of a circular wall which must have originally enclosed an area about 1,000 feet in diameter. Here, too, as at Endere, the lower portion of the circumvallation consists of a rampart of hard stamped clay, while above it rises a parapet, 8 feet thick, solidly built of large-sized bricks and suggesting considerable antiquity. The débris which covers the open ground between the dunes for some distance around the ruined fort furnishes Chinese coins of the Han period and plentiful small remains, such as seals, &c. All those acquired by me seem to point to an early abandonment of the locality. At a point some $1\frac{1}{2}$ miles to the south-west, known as *Kighillik* from a large deposit of ancient manure (*Kighik*), I discovered a considerable quantity of small relievo fragments which undoubtedly indicate the position of an ancient temple. Their execution is far superior to the Dandān-Uiliq work,

and their material is a remarkably hard stucco, which had evidently been burned.

Ruined Stūpa at Rawak.

On the 10th April I left Ak-sipil, and marching due north through the sand for about 14 miles arrived at the ruins called *Rawak* by Turdi and the men of his craft. Here a pleasant surprise awaited me. My guides had spoken only of "an old house" to be seen there half-buried in the sand, but in reality the first glimpse showed me a large Stūpa with its enclosing quadrangle, by far the most imposing structure I have seen among the extant ruins of the Khotan region. Large dunes, rising over 25 feet in height, cover the quadrangle and part of the massive square base of the Stūpa on the N.W. and N.E. faces. But on the other sides the drift sand was lower, and fragments of colossal stucco statues, the spoil of casual diggings by "treasure-seekers," were seen lying on the surface. The excavations, which I began without delay, were greatly facilitated by the relative ease with which I was able to secure a large number of labourers from the nearest villages of the Khotan oasis, and to maintain them at the spot. For though the sand dunes surrounding us looked formidable enough, it was possible to dig a well in a depression within two miles of the Stūpa.

The Stūpa court, enclosed by a massive wall of sun-dried bricks, forms a quadrangle 164 feet long and 143 feet broad. The centre of this court is occupied by the imposing Stūpa base, which rises in two stories to a height of 20 feet above the original floor. Owing to bold projections on each face supporting well-proportioned flights of steps, the ground plan of the base shows the shape of a cross, each arm of which extends to 95 feet on the lowest level. The diameter of the Stūpa dome, which is raised on a projecting circular drum, measures a little over 32 feet. The dome has been dug into from the west and its top broken long ago, the extant masonry reaching to a height of 33 feet above the level of the court. The noble flights of steps which occupied the centre of each of the four faces of the base, and led up without a break from the court to the foot of the dome, must have formed an imposing feature. The one on the S.E. side, which faces the entrance gate of the quadrangle, could alone be cleared. The flanking portions of the base, which were also excavated, proved to be coated with a thick layer of white stucco which originally covered probably the whole of the structure.

The great archæological interest of the ruins, however, does not centre so much in the Stūpa as in the remarkable relievos decorating the walls of the Stūpa court. These were brought to light by the excavations which I commenced close to the inner south corner of the quadrangle, where the sand lay only 7 to 8 feet deep, and which were extended along the S.W. and S.E. walls as far as the rising dunes permitted. The walls both towards the court and outside were found to be adorned with rows of colossal statues in stucco representing Buddhas or Bodhisattvas. Between them at frequent intervals were smaller relievo representations of attending deities and saints. In numerous instances the walls were further decorated with elaborate *plaques* forming halos above and around the main figures, as well as with fresco paintings. The whole of the relievo work had originally been coloured, but the layers of paint had peeled off except where well protected in drapery folds, &c., thus leaving the greatest portions of the stucco images in their terra-cotta ground colour.

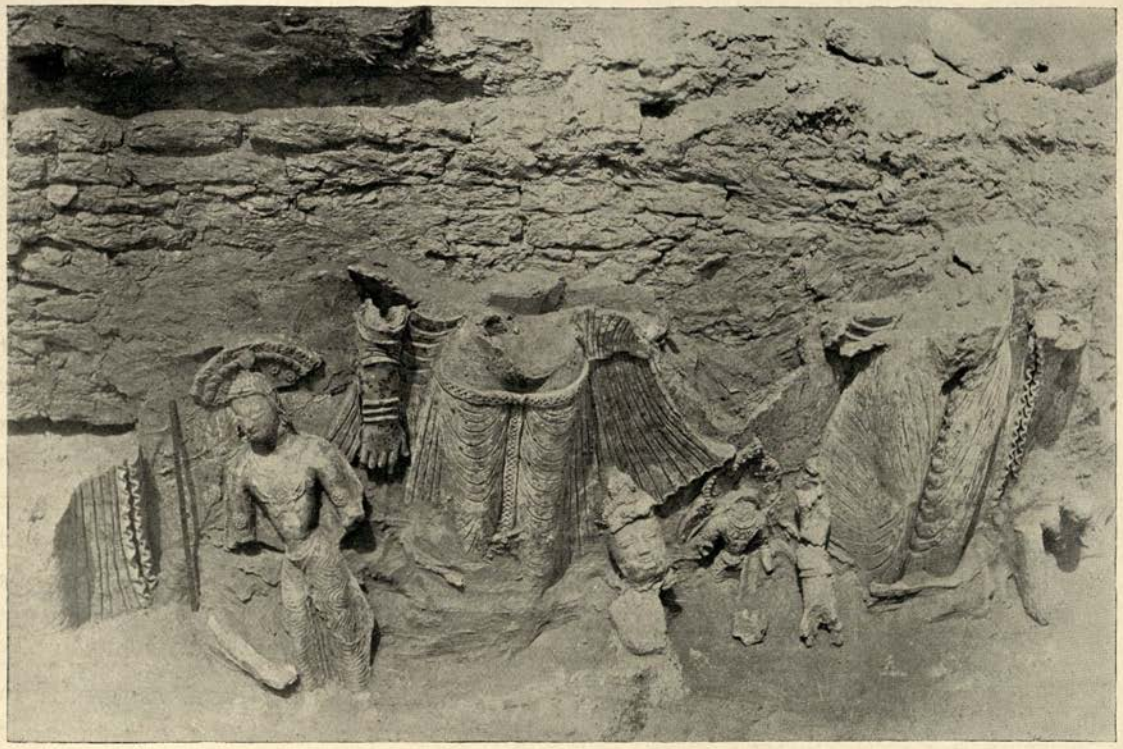
Sculptures of Rawak Stūpa court.

The excavation of the relievos was attended with great difficulty. Owing probably to the moisture rising from the neighbourhood of subsoil water, the strong wooden framework which once supported the masses of stucco and fastened them to beams let into the wall behind had completely rotted away, its place being now marked only by cavities. Deprived of this support the heavy stucco images threatened to collapse when the protecting sand was being removed. The Burans, which were blowing with more or less violence during the whole of my stay at Rawak, greatly added to this risk. Experience showed that it could be obviated only by extreme care in clearing the relievos and by covering up again their lower portions as soon as they had been photographed. Even so damage could not altogether be prevented. That most of the colossal statues were found without their heads, is probably due to the same cause, the upper portions having necessarily been left far longer without the protecting cover of sand. It may be noted here that I failed to trace any evidence of destruction by human agency. This tends to show that the ruins were already well covered up at the time of the introduction of Islām.

Excavation of colossal relievos.

The total number of individual relievos of large size which were unearthed along the cleared portions of the S.W. and S.E. walls, amounts

12.



BROKEN RELIEVOS OF RAWAK STŪPA COURT, IN COURSE OF EXCAVATION.

13.

COLOSSAL RELIEVO FIGURES, WITH SMALL SEATED BUDDHA, RAWAK STŪPA COURT, AFTER EXCAVATION.

to 91. In addition to these, very numerous small relievos, forming part of halos, &c., were brought to light. Instead of attempting a description of this wealth of materials, I may refer to Photographs 12 and 13, which show portions of the inner S.W. wall during and after excavation.[1] On No. 12 the careful execution of rich drapery covering the large images may be noticed, while in No. 13 the well-modelled figure of the seated Buddha and the halo of the larger standing image behind, filled with representations of teaching Bodhisattvas or Arhats, deserve attention. Owing to the extremely friable condition of the stucco and the difficulties of transport, it was quite impracticable to attempt the removal of the larger relievos. But of the smaller ones and of sculptural pieces already detached, I succeeded in bringing away a considerable number without mishap. The head of a life-size figure, probably a Buddha, and the small seated figure once forming part of a decorative halo, which are reproduced on Plate XIV., may serve as specimens of the collection carried safely to England.

Style and date of Rawak sculptures.

The affinity which the Rawak relievos show in style and most details of execution with the so-called Græco-Buddhist sculptures of the Peshawar Valley and the neighbouring regions is striking enough to make their close study a matter of much historical and artistic interest. The complete series of photographs taken by me will facilitate this task. Unfortunately our data for the chronology of that "Græco-Buddhist" art in India are as yet too scanty to permit any safe conclusion as to the date of the Rawak relievos. No epigraphical finds of any kind were made in the course of my excavations, nor has any discovery of manuscript materials ever been reported from this site. But I was lucky enough to secure *in situ* numismatic evidence which may prove of distinct chronological value. In clearing the pedestals of several relievos and the base of what seems to have been a small detached votive Stūpa inside the quadrangle, we came again and again upon Chinese copper coins belonging to issues of the Han dynasty. Here, as well as in the wall near the gateway, these coins were invariably found within small cavities and interstices of the plaster or brickwork, into which they had manifestly been slipped as votive offerings. The total number of these coins amounts to close on a hundred. Most of them are in good preservation

[1] The scale of the sculptures can be estimated by the three-feet measure visible on the left side of each photograph.

and do not show any marks of long circulation, previous to their deposition. Only current coins are likely to have been used for such humble votive gifts, and as no finds of a later date have come to my knowledge, I am inclined to believe that the latest known date of those coin-issues marks the lowest chronological limit for the Rawak sculptures. The rule of the later Han dynasty covers the period 25–220 A.D., but the issue of some of its currencies appears to have continued to the close of the fourth century.

By the 18th April those portions of the Stūpa court which were not actually buried under sand-dunes had been explored. The excavation of the other parts would be a task requiring months of labour and proportionately heavy expenditure. The sand-storms which visited us daily, and the increasing heat and glare, had already made the work very trying to the men as well as myself. It was manifestly time to withdraw from the desert. Before, however, leaving the ruins I took care to protect the sculptures which could not be moved, by having the trenches that had exposed them filled up again. Jumbe Kum was the only remaining desert site around Khotan from which finds had previously been reported to me. I had taken occasion to visit it from Rawak and had ascertained that this débris-strewn *Tati* contains no remains capable of excavation. Thus, when on the 19th April I started back to Khotan, I had the satisfaction of knowing that the programme of my explorations in the desert was completed.

During an eight days' stay at Khotan that followed, I was busily engaged in arranging archæological finds which had accumulated in the course of the previous four months, and carefully repacking them for their long journey. My halt also enabled me to clear up the last doubts as to the real nature of the strange manuscripts and blockprints in "unknown characters" which, as already mentioned (*see* pp. 21, 24), had during recent years been purchased from Khotan in such remarkable numbers. The grave suspicions which my previous inquiries led me to entertain about the genuineness of these "finds" had been strengthened in an increasing degree by the explorations of the winter. Though the latter had yielded ample manuscript materials, and in a considerable variety of languages and writing (Indian Brāhmī, Central-Asian Brāhmī, Kharoshṭhī, Tibetan, Chinese), I had utterly failed to discover the smallest

Inquiry into suspected MSS. and prints "in unknown characters."

scrap of writing in "unknown characters." On my return to Khotan I communicated to Pan-Darin, the Amban, my wish for a personal examination of Islām Ākhūn, who was mainly concerned with the sale of those queer manuscripts and prints that had reached the "Collection of Central-Asian Antiquities" formed in India. A few days later Islām Ākhūn was duly brought up from Chīra, a village of the Keriya district, where he had recently been practising as a "Hakim" or medicine-man. He had taken to this calling since the sale of "old books" fell off, about 1898, owing to the growing suspicion attaching to them among the European residents of Kashgar. In the meantime he had tried also to make a living by representing himself among the ignorant hillmen of the Khotan and Keriya districts as an agent sent by Mr. Macartney to look after the release of slaves originally carried away from Indian territory. By this imposture he had managed to levy blackmail, but being found out had subsequently, on Mr. Macartney's representation, been duly punished by the Chinese authorities. Curiously enough I found among the papers which had been seized on Islām Ākhūn's person, the very document that had been passed off by him as his official credentials in that fraud. It was a Swedish newspaper nicely drawn up on cloth and showing the portrait of a missionary in China for which Islām Ākhūn pretended to have sat himself. The other "papers" consisted of some sheets of paper containing "texts in unknown characters" written and block-printed, and leaves of a French novel.

Examination and confession of forger.

The examination of this interesting individual proved a lengthy affair. He readily confessed his guilt in the above "personation case," and also to having on another occasion obtained money by a forgery purporting to be in Captain Deasy's handwriting. But in the matter of the "old books" he at first protested complete innocence. He pretended to have acted merely as the Kashgar sale agent for certain persons at Khotan, since dead or emigrated, who, rightly or wrongly, told him that they had picked them up "in the desert." When he found how much these "books" were appreciated by Europeans, he asked those persons to find more. He himself had never visited any of the find-places, &c. How Islām Ākhūn's defence

ultimately collapsed in the course of a prolonged cross-examination, must be told elsewhere. He was greatly impressed by the fact that I was able to confront him, from the detailed account embodied in Dr. Hoernle's Report, with an exact reproduction of the elaborate stories which he had told to Mr. Macartney about his own alleged journeys and discoveries in the desert during the years 1895-98. Once assured that further defence was useless, and that no fresh punishment awaited him, Islām Ākhūn made a clean breast of it. His subsequent confessions proved correct on many important particulars when checked from the dates, &c., which had been recorded at Kashgar about successive purchases, as well as from the statements of a number of independent Khotan witnesses examined by me in the course of the inquiry. Islām Ākhūn proved to possess an excellent memory, and readily recognised among the plates accompanying Dr. Hoernle's Report those representing specimens of the block-printed books in "unknown characters" which formed his own manufacture. He had, previous to the year 1894, been engaged at times in collecting coins, seals, and similar antiques from Khotan villagers. About that time he learned from Afghan traders of the value which the "Sahibs" from India attached to ancient manuscripts, of which, indeed, genuine scraps had been unearthed by Turdi and some other "treasure-seekers" at Dandān-Uiliq. Islām Ākhūn, when pressed for such "old books," was intelligent enough to conceive the plan of manufacturing them in preference to trying his luck at dreary desert sites which he had never visited. In this enterprise he had several accomplices, among whom a certain Ibrahīm Mullah was the leading man. This person, who appears to have specially interested himself in sales of "old books," &c., intended for Russian hands, and from whom the Russian Armenian above mentioned had purchased his forged birch-bark manuscript, unfortunately disappeared from Khotan on the first news of Islām Ākhūn's arrest, and could not be confronted with him.

Islām Ākhūn's manufacture of "old books."

The first "book" produced in this fashion was sold by Islām Ākhūn in 1895 to Munshi Ahmad Dīn, who was in charge of the Assistant-Resident's office at Kashgar during the temporary absence of Mr. Macartney. This "book" was written by hand, and an attempt had apparently been made

there, and perhaps in other of the earliest products of the factory, to imitate roughly some of the Brāhmī characters found in a genuine piece of manuscript which one of the forgers had secured from Dandān-Uiliq. But the attempt must have been very primitive, and the result was, in reality, one of the several varieties of "unknown characters" which appear in all manuscripts and books purchased from Islām Ākhūn. Seeing that remunerative prices could be obtained for such articles at Kashgar, and also from Ladak, the efforts of the forgers were stimulated. As Islām Ākhūn realised that his "books" were readily paid for, though they could not be read, it became unnecessary to trouble about the imitation of genuine writing. Thus, apparently, each individual factory "hand" had free scope for inventing his own "unknown characters." This explains the striking diversity of these remarkable scripts. The rate of production by the laborious process of handwriting was, however, too slow, and accordingly Islām Ākhūn's factory took to the more convenient method of producing books by means of repeated impressions from a series of wooden blocks. The preparation of such blocks presented no difficulty, as printing from wooden blocks is extensively practised in Turkestan, in the case of both Chinese and Turkī texts. This "printing" of old books commenced in 1896, and its results are partly represented by the 45 "block-prints" which are described in the first part of Dr. Hoernle's Report.[1] Numerous other block-printed books in "unknown characters" appear to have found their way to public collections at St. Petersburg, London, Paris, and also into private hands. Islām Ākhūn fully described the procedure followed in preparing the paper that was used for the production of manuscripts or printed books, as well as the treatment to which the latter were subjected in order to give them an ancient look. Sheets of modern Khotan paper were first dyed yellow or light brown by means of *Toghrugha*, a resinous product of the *Toghrak* tree, dissolved in water. When the dyed sheets had been written or printed upon, they were hung up in smoke so as to receive the proper hue of antiquity. Afterwards they were bound up into "books," often, evidently, in a coarse imitation of European volumes. These again were treated to a liberal admixture between their pages of the fine sand of the desert in order to make them tally with the story of their long burial.

[1] See *Report on the British Collection of Central-Asian Antiquities*, 1899, pp. 45–110.

Forged MSS. and "block-prints" easily distinguished.

Notwithstanding the evident care which the forgers bestowed on this manipulation, it is easy to distinguish between Islām Ākhūn's fabrications and genuine old manuscripts in the light of the experience gained during my explorations. Not only in colour and substance of the paper, but also in arrangement, state of preservation, and a variety of other points, all genuine finds show features never to be traced in Islām Ākhūn's productions. Such material distinctions are at once perceptible, when the spurious purchases from Islām Ākhūn's factory are placed side by side with the paper manuscripts excavated at Dandān-Uiliq and Endere. But apart from this there is the plain fact the forgers never managed to produce a text exhibiting consecutively the characters of any known script, while, on the other hand, all ancient documents brought to light by my explorations show invariably a writing that is otherwise well-known to us. There is, therefore, little fear that Islām Ākhūn's forgeries will cause deception hereafter. But in view of the loss of valuable time and labour which they have caused to scholars, it was a satisfaction to me to think that this clever scoundrel had already, in one form or another, received from Chinese justice his well deserved punishment.

Return to Kashgar.

On the 28th April I left Khotan town for a farewell visit to the Yōtkan site and some localities in the north-western portion of the oasis. Three days later I set out for Kashgar, which I reached on the 12th May by a succession of rapid marches in advance of my caravan. The Government of India in the Foreign Department had obtained for me permission to travel through Russian Turkestan and to use the Transcaspian Railway for my intended journey to Europe. While my archæological collections were to be taken by myself to London, Sub-surveyor Ram Singh was to return to India viâ Hunza with the instruments, &c. He had rendered excellent service in accurately surveying the whole of the ground covered by my journeys in Chinese territory, and had in addition to his proper duties used every opportunity to make himself useful in connection with my archæological work, particularly by preparing plans of sites, buildings, &c. He had at all times cheerfully borne the fatigues inseparable from rapid travelling over difficult ground and often under trying climatic conditions, and had given me valuable help in the management of my camp. It

affords me true pleasure to be able to record publicly my grateful appreciation of the manifold assistance I received from him.

During the stay I was obliged to make at Kashgar in order to "demobilise" my caravan and to prepare for the journey to Farghana, I enjoyed once more the kind hospitality of Mr. MACARTNEY. Since my departure for Khotan in the previous autumn, he had given many proofs of the constant interest with which he followed my explorations. I had ample opportunities to convince myself that the assistance of the Chinese officials, which was essential for the success of my labours, was directly due to Mr. Macartney's influence and care. For all the help thus accorded to me I may be allowed to express here my feelings of sincere gratitude.

At Kashgar I had to part also with the camels and ponies which had served us so well during the journeys of the preceding eight months. That after all the hard marching and camping in the desert I was able to dispose of them with but small loss to Government may serve as a proof of the care we had taken of our animals. The arrangements for my onward journey were greatly facilitated by M. PETROVSKY, Imperial Consul-General of Russia at Kashgar, whose acquaintance I was fortunate enough to make on this occasion. M. Petrovsky, who during a prolonged residence in Turkestan has devoted a great deal of scholarly interest to the study of its history and antiquities, did all in his power to assure the safe transit of my collections and to secure for me the friendly assistance of the authorities in Russian Turkestan. On the 29th May I was able to start from Kashgar with my archæological finds packed in twelve large boxes. Though there was still much snow on the Alai Passes they were crossed without mishap. At Osh, the first town in Farghana, I was very kindly received by Colonel ZAITSEFF, the Chief of the District, and at Andijan I reached the terminus of the Transcaspian Railway. By it I travelled to Krasnovodsk, making short halts at the provincial capitals, Margelan and Samarkand. The Governors of both places were kind enough to offer me special opportunities for examining the antiquities in the local museums and also otherwise assisted me. From Krasnovodsk I crossed the Caspian to Baku, and finally, on the 2nd July, I arrived in London, where I was able to deposit my collection in the British Museum as a safe temporary resting-place.

Journey through Russian Turkestan.

Preliminary arrangement of collection in London.

On the proposal of the Indian Government, His Majesty's Secretary of State for India sanctioned for me a six weeks' period of deputation in London, in order to enable me to make a preliminary arrangement and inventory of my archæological finds. The authorities of the British Museum, acting on the request submitted for me by my friend, Mr. E. J. Rapson, of the Coin Department, very kindly agreed to afford accommodation for the collection, pending arrangements for its final distribution between their own museum and the museums of Calcutta and Lahore. They also liberally accorded to me all needful assistance towards the cleaning and preservation of more delicate objects, such as manuscripts, painted tablets, &c. It was a relief to find that the long and partly difficult transport had caused but very slight damage to the antiquities and the 800 odd negatives on glass plates, brought back as the photographic results of my journey. But, owing to the large number of objects, the task of arranging and cataloguing proved a very exacting one. In consideration of this, His Majesty's Secretary of State was pleased to extend my deputation by another period of six weeks. For this concession I beg to express here my sincere gratitude. I was thus enabled to complete the preliminary arrangement of the collection, as well as to supervise the preparation of all my photographic records. For the catalogue work I was fortunate in securing the expert help of my friend, Mr. F. H. Andrews, who in his late post as Principal of the School of Art and Curator of the Museum at Lahore has acquired a wide knowledge of ancient Indian art. It was mainly through his devoted exertions that a provisional slip catalogue of the whole collection was finally completed within the limited time available.

My approaching return to India, to duty as Inspector of Schools, makes it impossible for me to continue that close study of the finds which is necessary for a final report on the archæological results of my journey. Fortunately arrangements could be made which will permit of the whole collection remaining, as a temporary measure, within the British Museum, and under the immediate care of Mr. Rapson. Thus it is assured that none of the evidence needed for that task will be lost by a premature distribution of objects or otherwise. In the meantime all reasonable facilities will be secured to those expert scholars whose help is needed for the examination of particular branches of epigraphical or antiquarian importance.

The present Preliminary Report, for the publication of which I am indebted to the liberality of His Majesty's Secretary of State, will help to illustrate the wealth of materials awaiting such study. I trust it may also show that I have spared no efforts to make full use of the opportunities which the Indian Government so generously accorded to me in the interest of archæological science.

M. A. STEIN.

British Museum,

5th October 1901.

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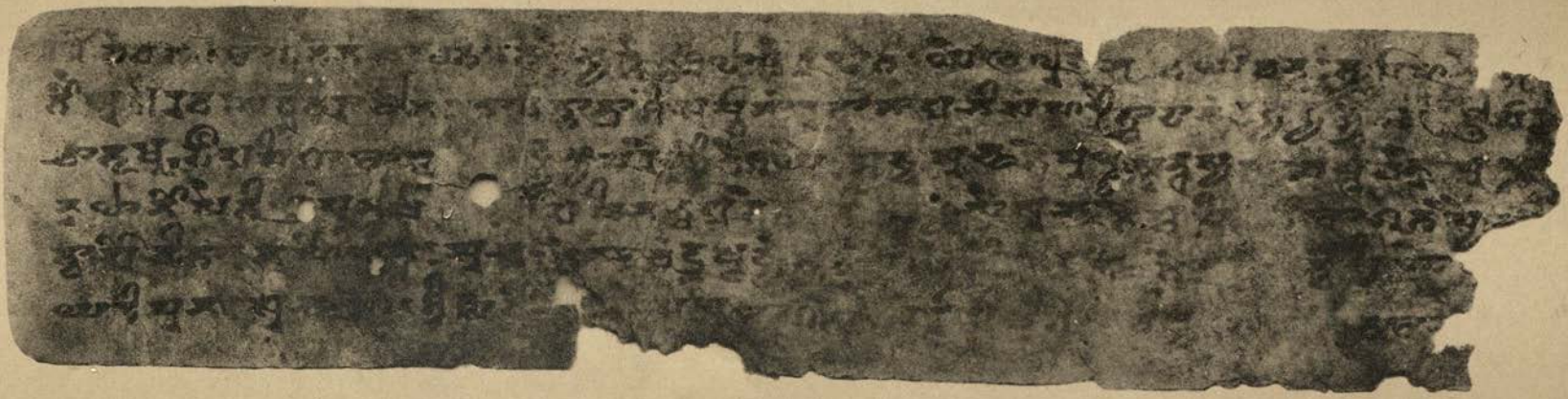

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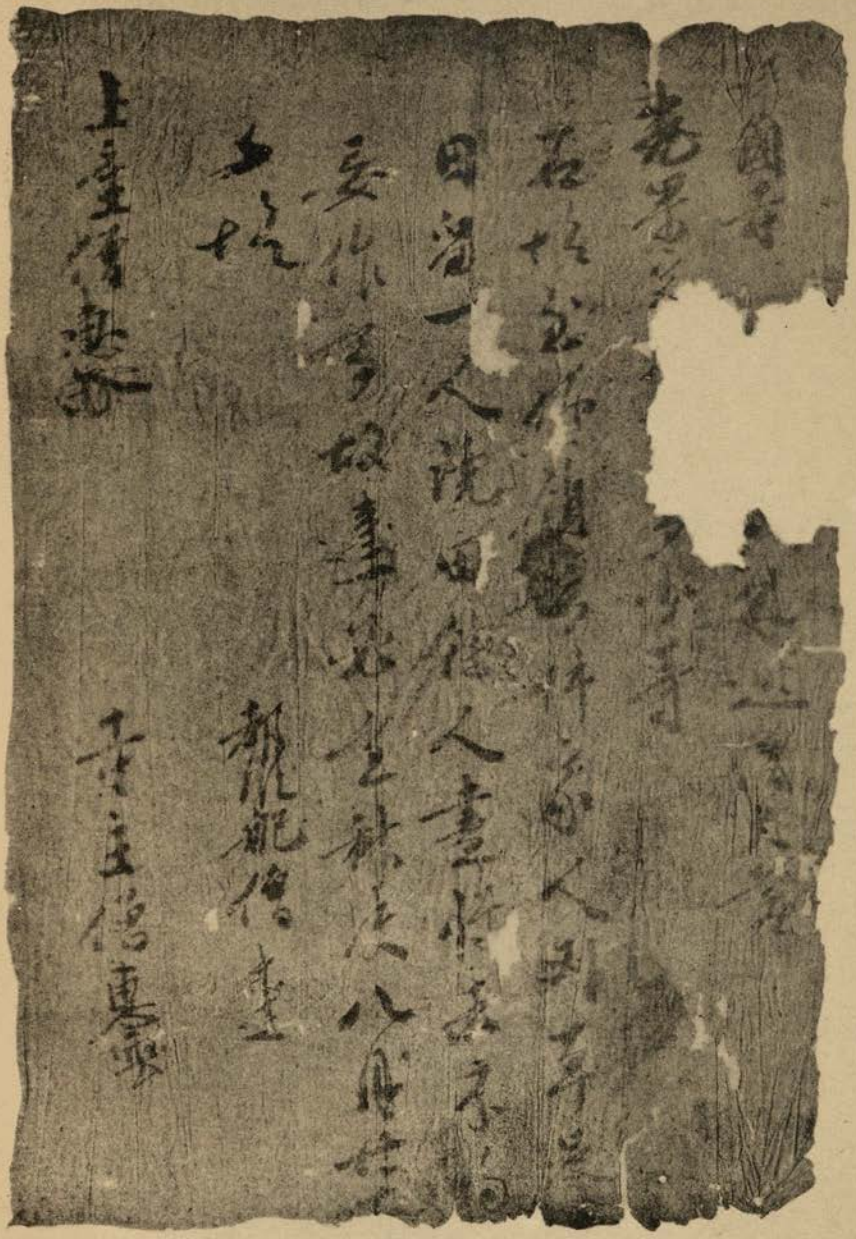

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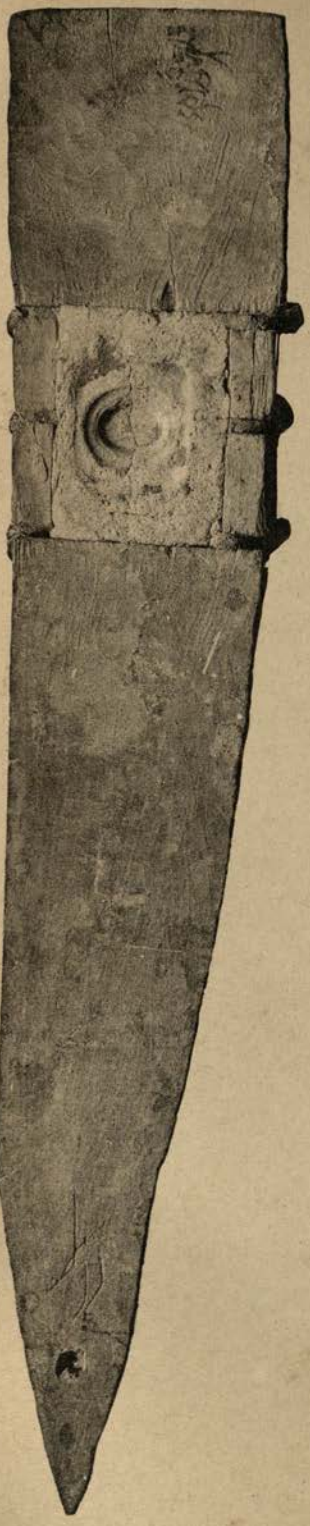
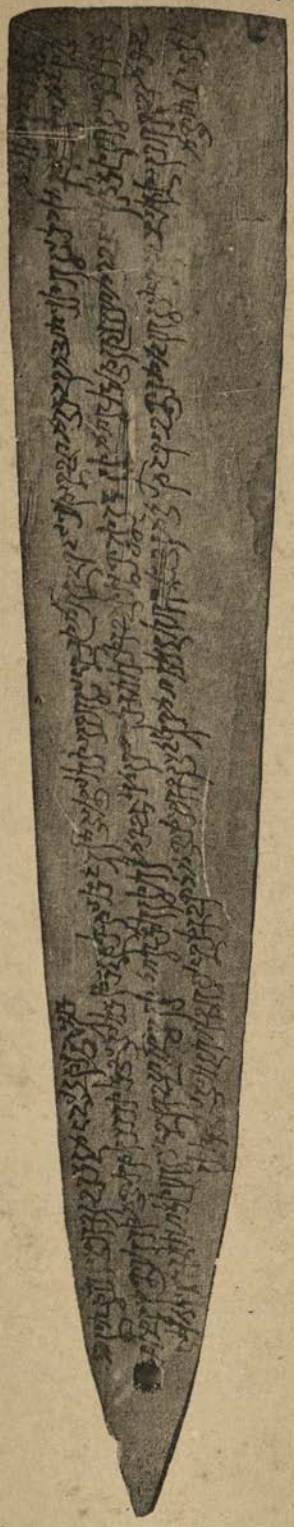
CHINESE DOCUMENTS, ON WOODEN TABLETS,
FROM NIYA RIVER SITE.



REVERSE OF UNDER-TABLET.

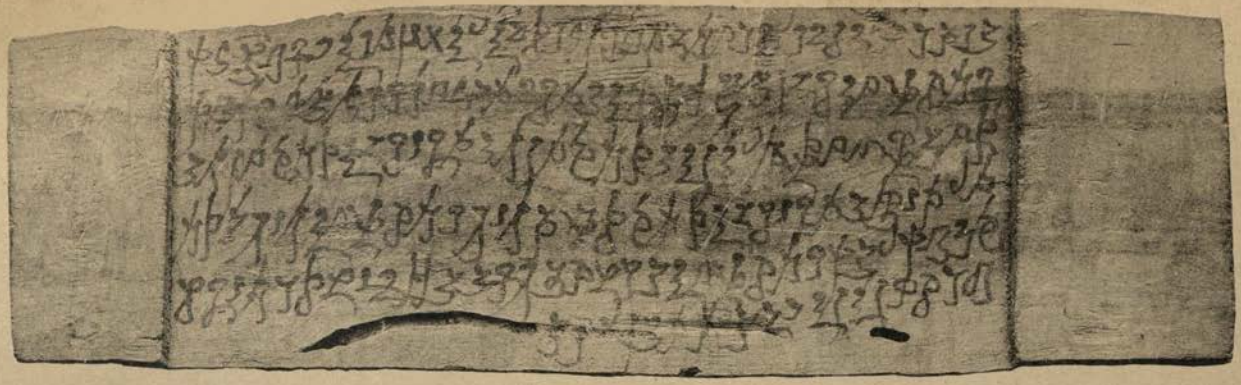
OBVERSE OF UNDER-TABLET.



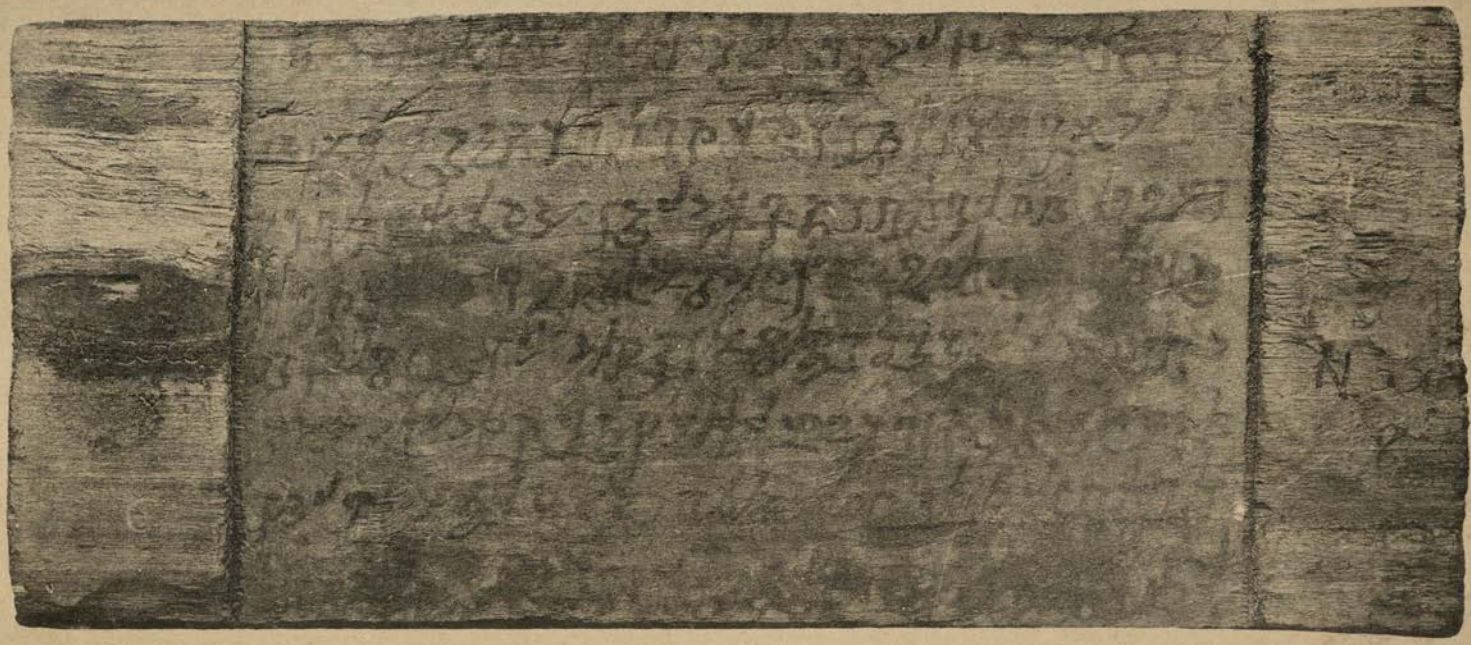
KHAROSHṬHĪ DOCUMENT ON DOUBLE WOODEN TABLET, N. xv. 137, (1/1).
FROM NIYA RIVER SITE.

WOODEN PEN WITH BONE KNOB, FROM N. xv. (1/1).

N. xvii. 2 (1/1).



N. xx. 8 (1/1).

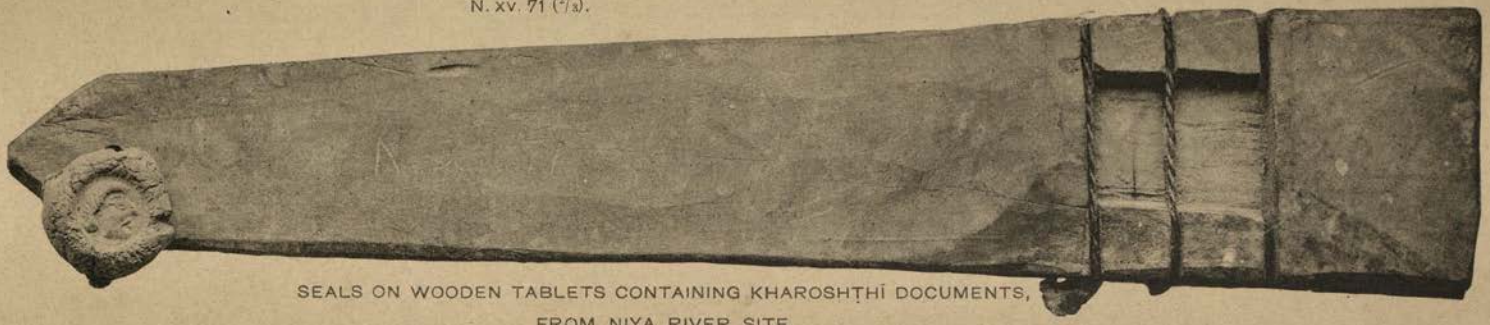


KHAROSHṬHÍ DOCUMENTS ON WOODEN TABLETS,
FROM NIYA RIVER SITE.

N. xv. 330 (1/1).

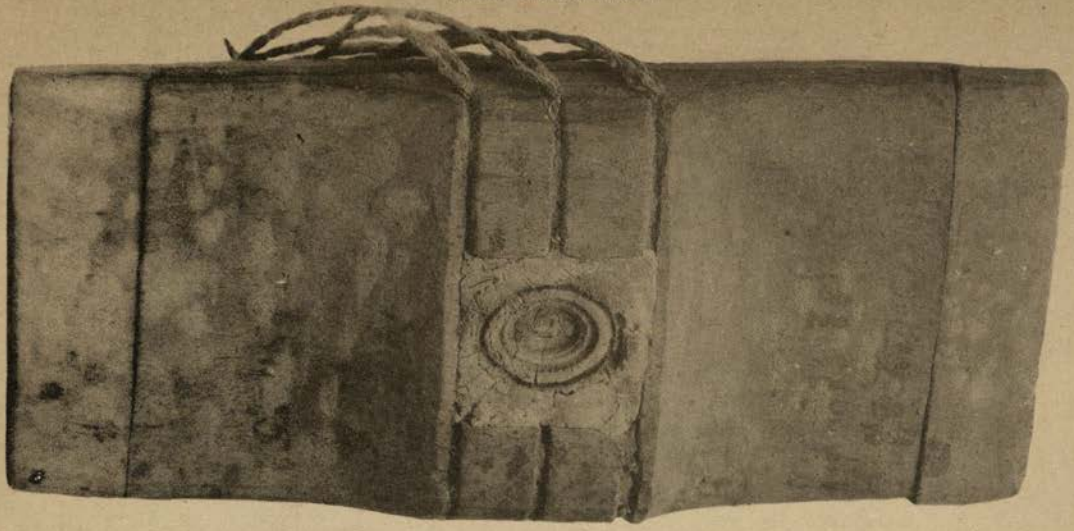
N. xv. 196 (1/1).

N. xv. 71 (2/3).



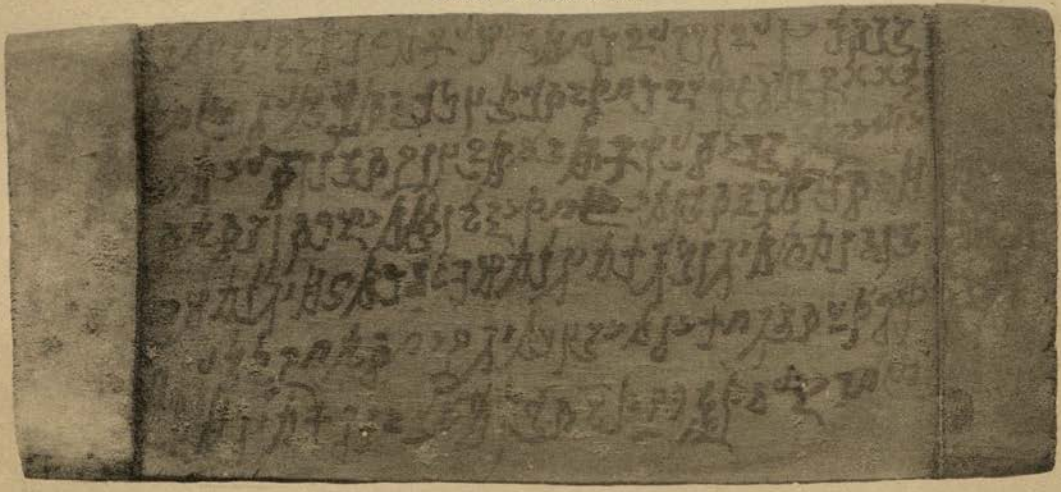
SEALS ON WOODEN TABLETS CONTAINING KHAROSHṬHĪ DOCUMENTS,
FROM NIYA RIVER SITE.

DOUBLE TABLET UNOPENED.



REVERSE OF COVERING TABLET.

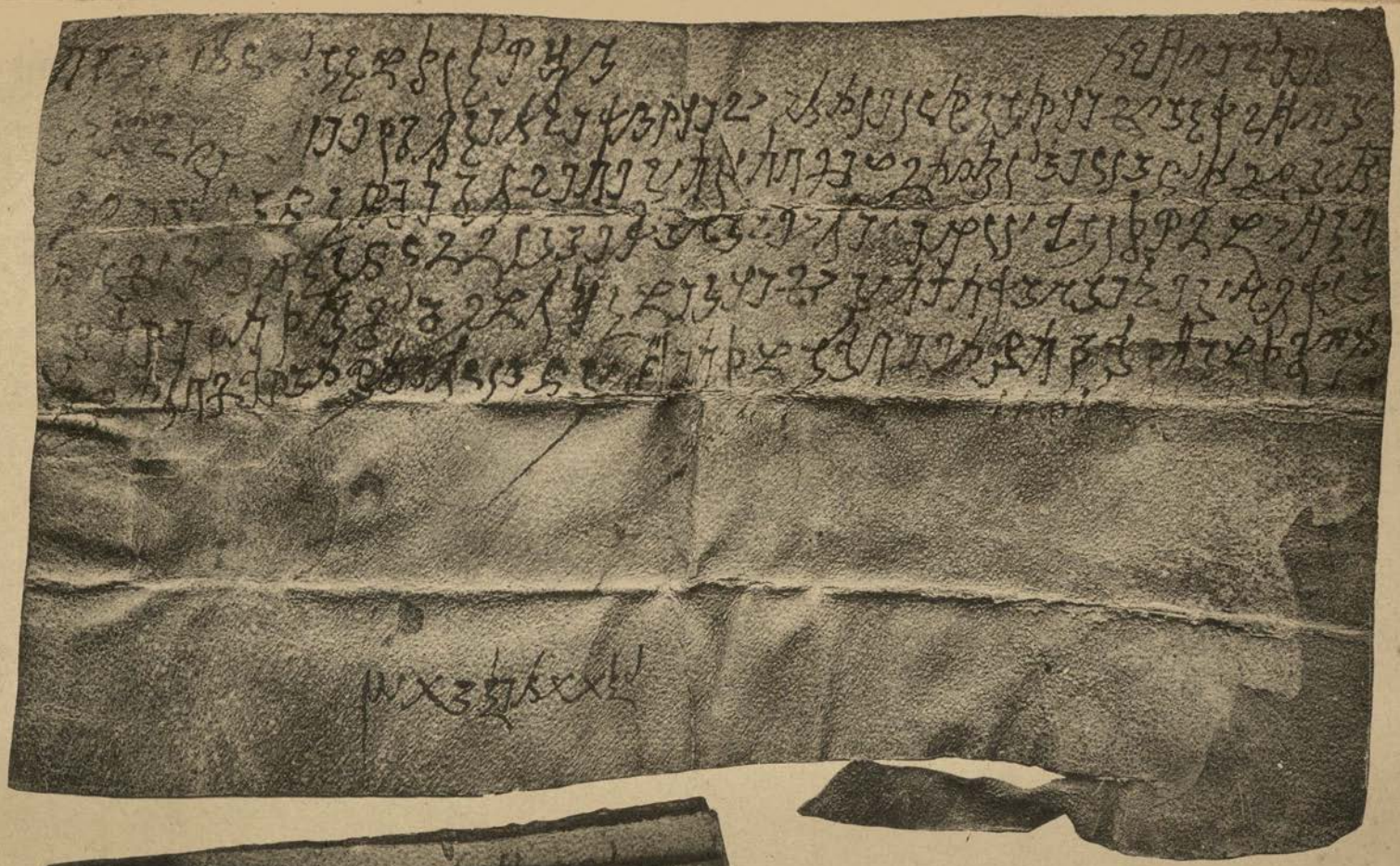
OBVERSE OF UNDER-TABLET.



KHAROSHṬHĪ DOCUMENT ON DOUBLE WOODEN TABLET.

N. xv. 166, (1/1),

FROM NIYA RIVER SITE.



B

KHAROSHṬHĪ DOCUMENT ON LEATHER,
N. XV. 310 (1/1),
FROM NIYA RIVER SITE.
A *unfolded*, B *in original folded state.*

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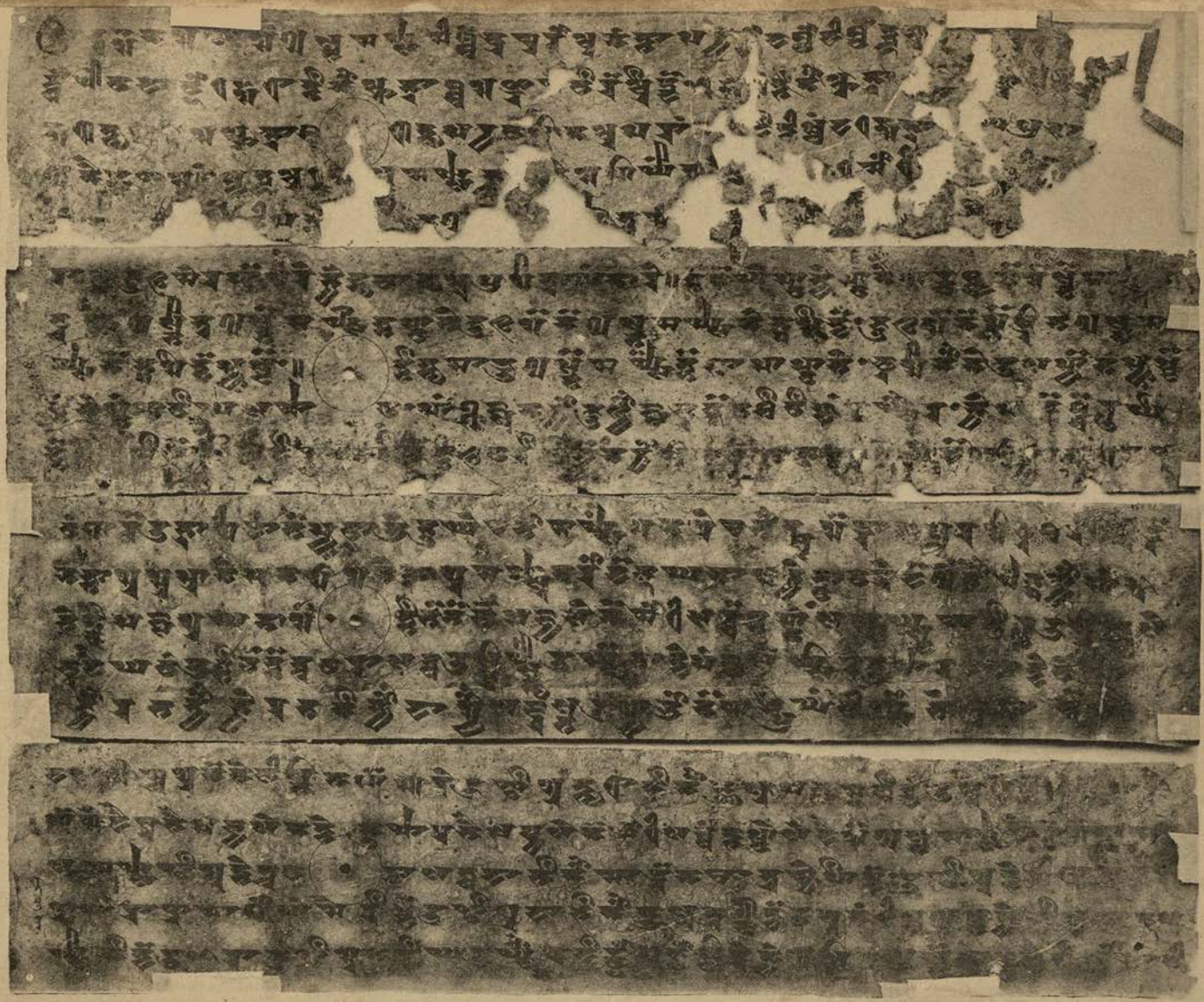
PIECE OF COLOURED RUG, (1/2),
FROM RUINED DWELLING, N.III.,
NIYA RIVER SITE.

OBJECTS IN STONE, METAL AND IVORY, (1/1),
FROM YÖTKAN, NIYA RIVER AND ENDERE SITES.

ANCIENT WOODEN CHAIR, (1/4),
FROM RUINED DWELLING HOUSE, N.III.,
NIYA RIVER SITE.

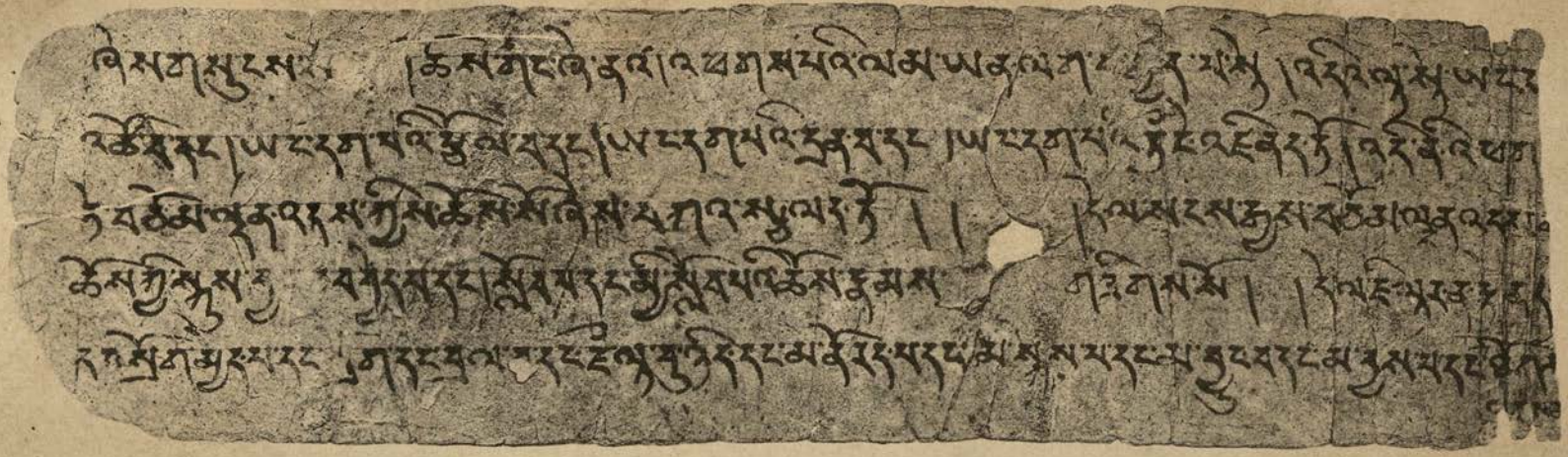
R.II. (4/5).
HEAD OF
LIFE-SIZE STUCCO
RELIEVO, ORIGIN.
COLOURED, FROM
RAWAK STŪPA COURT.

R.s.2, (1/1).
STUCCO RELIEVO FROM WALL-DECORATION OF
RAWAK STŪPA COURT.

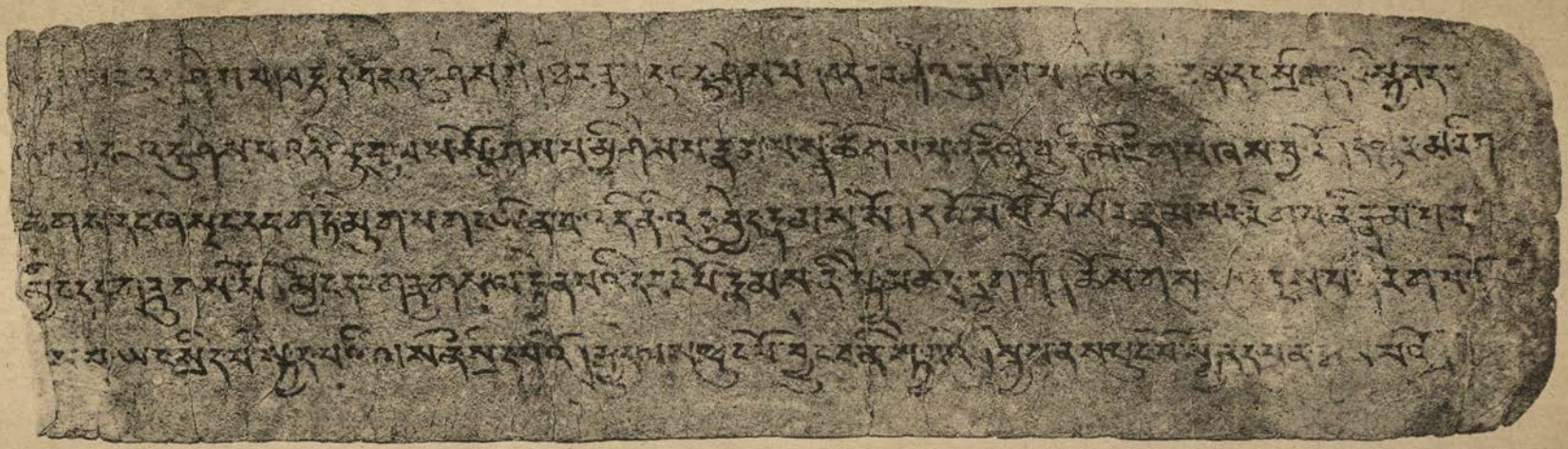


OBVERSES OF CENTRAL-ASIAN BRÂHMÎ LEAVES UNFOLDED
FROM PAPER ROLL E.I.7., FOUND IN RUINED TEMPLE, ENDERE SITE (1/3).

E. I. 32α (1/1).



E. I. 32β (1/1).



LEAVES OF TIBETAN MANUSCRIPT ON PAPER,
FROM RUINED TEMPLE, E. I., ENDERE SITE.

00083005

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